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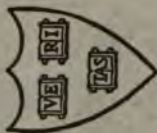
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BY

JOHANN FRIEDRICH HERBART

TRANSLATED FROM THE ORIGINAL GERMAN

BY MARGARET K. SMITH

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EDITOR'S PREFACE.

THE present work is a translation of Johann Friedrich Herbart's *Lehrbuch zur Psychologie*, from the second revised edition published in 1834—the date of the first edition being 1816.*

The fact that Herbart's philosophical writings have given a great impulse to scientific study and experiment in education is a sufficient reason for including this volume in the International Education Series.

He succeeded Krug in 1809, and filled for a quarter of a century afterward the chair long occupied by the celebrated Kant at the University of Königsberg, supplementing his philosophical labors by founding and directing a pedagogical seminary (or normal school, as we call it in the United States). It is interesting to note that Herbart's successor at Königsberg was Karl Rosenkranz, also eminent in the philosophy of pedagogy.

Although a German philosopher and occupying the chair of Kant, Herbart set out from an entirely different basis, and produced a system unlike those of the great geniuses who have made German philosophy forever memorable. So unlike them, indeed, is his sys-

* G. Hartenstein's edition, Hamburg and Leipsic, 1886.

tem that one has great difficulty to trace their influence upon his thoughts. Strange to say, however, his system becomes fruitful in the following generation, in two directions: first, in the line of physiological psychology, especially in the attempt to reduce the facts of the mind to mathematical statements; and, secondly, in the line of the philosophy and art of education.

A careful examination of the pedagogical writings of the followers of Herbart shows that the important thought which has become so fruitful is that of "apperception." This is specially named or referred to in §§ 26, 40, 41, 43, 59, 123, 182, 183, and in many other places in the following work. It is, in fact, the central thought from which the author proceeds and to which he always returns.

To explain this idea we contrast *perception* with *apperception*. In *perception* we have an object presented to our senses, but in *apperception* we identify the object or those features of it which were familiar to us before; we recognize it; we explain it; we interpret the new by our previous knowledge, and thus are enabled to proceed from the known to the unknown and make new acquisitions; in recognizing the object we classify it under various general classes; in identifying it with what we have seen before, we note also differences which characterize the new object and lead to the definition of new species or varieties. All this and much more belong to the process called *apperception*, and we see at once that it is the chief business of school instruction to build up the process of apperception. By it we re-enforce the perception of the present moment by the aggregate of our own past

sense-perception, and by all that we have learned of the experience of mankind.

Here, then, is the great good that comes from the Herbartian pedagogics; it lifts up the so-called "New Education" from its first step where it was left by Pestalozzi to a second step which retains all that was valuable in the new education, and at the same time unites with it the permanent good that remained in the old education.

For Pestalozzianism laid great stress on sense-perception (*Anschauung*) without considering what it is that makes sense-perception fruitful. It is not what we see and hear and feel, but what we inwardly digest or assimilate—what we *apperceive*—that really adds to our knowledge.

As soon as instruction mounts to this second step it ceases to talk about the cultivation of outer perception—as if mere acuteness of sense were in itself the end of instruction—and turns its attention upon the systematic building up of the *inner* faculty of perception—the recognizing faculty. It accordingly investigates carefully the course of study. What shall one study to give him most assimilative power? What shall he study to make him at home in the world of Man and the world of Nature, so that he may readily comprehend all that comes into his experience?

What items shall enter the course of study, is a question that concerns vitally the practical success of the school. But it is equally important to fix the true order of studies. The knowledge of apperception gives the clew to the order in which the separate branches and disciplines should follow one another. Those studies should precede which furnish the data

for apperceiving the elements of the studies that follow. Those studies should come later which presuppose the results reached in the earlier branches. The interesting experiments in "concentric instruction," wherein Grimm's Fairy Stories or Robinson Crusoe is used as the central theme of interest and all the other studies of the course are brought into connection with it for purposes of apperception, may be referred to here * as illustrating the mode and manner in which the idea is applied in some parts of Germany. Each class is to have its *Gesinnungsstoff*, or subject-matter that interests all the pupils and appeals to their imagination and feelings. This furnishes a center of interest for everything else—geography, history, arithmetic, language-study, etc.

It is obvious that the pedagogy of all lands will take a great step forward when it leaves the crude first stage of work that is characterized by bald verbal memorizing or by equally defective training of sense-perception by object-lessons, and takes its stand on the theory of apperception. It will then subordinate verbal memorizing and aimless lessons in sense-perception for really nourishing instruction and inward growth.

HERBART'S SCAFFOLDING TO THE DOCTRINE OF APPERCEPTION.

The idea of apperception underlies, as we have said, the entire treatise presented in this book. The other matter may be regarded as scaffolding erected for the purpose of explaining the operations of this act.

* See Dr. L. R. Klemm's *European Schools*, pp. 184, 211.

There must be, it is evident, ideas stored up in the mind from former experience, and these ideas may be in the mind but out of consciousness at any given moment. This gives us the theory of the threshold of consciousness (p. 12), and of the ideas that rise from unconsciousness above that threshold into consciousness when incited by other ideas which are kindred to them. The doctrine of *complexes and blendings* (p. 17) gives his notion of the close association of ideas in the case of thing and properties, or of the union of opposites. These views he grounds in a theory of the unity and simplicity of the soul and an interrelation between one simple essence (*Wesen*) or monad and another, in which relation one monad acts upon another, which reacts again upon it (p. 119). This action and reaction is a process of self-preservation. The self-pervations, or the results of this reaction, are ideas or concepts (*Vorstellung* means mental image, or concept, or representation, or presentation—in short, any and all mental products included under the English word *idea* in its widest application).

Then there naturally follows a consideration of the mathematical relations of the rising and sinking of these ideas in consciousness (pp. 18–22). Here the doctrine of series is suggested; for, since one idea calls up another complicated or blended with it, it must be clear that ideas are always to be found as members of series or groups; and, moreover, the same idea will likely enough form a link in each one of several different series. Hence the complexity of association becomes apparent. The interaction between mind and body (p. 34) is an element to be considered in the mathematical calculations. The classification of the mental

phenomena and the old theory of faculties can not be passed without notice, and the author discusses it throughout Part Second of the work.

Herbart's scaffoldings of explanation may be true or false, but even if false his investigation is of permanent value, because it singles out for its object this problem of apperception. Thus few will find what he says in regard to the will (pp. 82, ff.) satisfactory, because the will is included under desire: "The will is desire, accompanied with the conviction that the object desired can be attained." But the comparative psychology of the will may trace desire and will to one root in creatures below man. So, too, intellect and feeling have one root in the same lower order of creatures.

MATHEMATICS IN PSYCHOLOGY.

In this Text-book of Psychology Herbart indicates the mathematical application that may be made in psychology, but does not develop it so fully as in a subsequent work published in 1824 entitled "Psychology as a Science founded for the First Time on Experience, Metaphysics, and Mathematics." There are three important mathematical formulæ treated: (1) Of two concepts, no matter how unequal their respective strength, the one can never quite obscure or arrest the other (i. e., drive it out of consciousness); but of three or more concepts, it may happen that one is so weak as to be entirely arrested by the other two (p. 12). This is proved in the Psychology as Science, by showing of two concepts a and b , that the amount of arrest is expressed in the proportion $a + b : a :: b : \frac{ab}{a + b}$.

So that a has a remainder $= a - \frac{b^2}{a+b}$, while b has a remainder after arrest $= b - \frac{ab}{a+b} = \frac{b^2}{a+b}$; and it is obvious that this can become zero only when a is infinite. The case in which there are three concepts, a , b , and c , give for the remainder of c the expression $c - \frac{ab(b+c)}{bc+ac+ab}$, and the conclusion that there may be zero for result—where, for example, a and b are equal and their sum is equal to three times the value of c . (Psychol. als. Wiss., §§ 44, 45.)

The second mathematical formula (p. 13, § 17) states that, while the arrested portion of the concept sinks, the sinking portion is at every moment proportional to the part not arrested. Herbart gives the integrated expression for this, namely, $\sigma = S \left(1 - e^{-t} \right)$ in which S = the aggregate amount arrested; t = the time elapsed during the collision of concepts; σ = the arrested portion of all the concepts in the time indicated by t ; e = the basis of the natural system of logarithms. In § 74 of the Psychology as Science he gives the differential equation from which this is derived: $(S - \sigma) dt = d\sigma$.

The third mathematical statement (§§ 24–28, pp. 18–22) concerns the assistance which one idea gives another to recall it into consciousness. Herbart gives, in § 25, both equations, the differential and integral.

The expression $\frac{rP}{\Pi}$ indicates how much help Π (a concept in the mind but unconscious) received from P (a conscious concept or percept) to lift it above the threshold of

consciousness. Π also aids P to the extent indicated by $\frac{r\rho}{P}$. In this expression r = the remainder of P that is not arrested, and ρ the remainder of Π unarrested. Now the aid given by P to Π is greater before the union of r with ρ than after some part of the union has taken place. Herbart lets the portion of ρ which is already united with r and brought into consciousness = ω .

Then the differential equation $\frac{r\rho}{\Pi} \cdot \frac{\rho - \omega}{\rho} \cdot dt = d\omega$ expresses the mode in which the influence of P on Π to bring up a new part of ρ into consciousness is conditioned by the amount remaining of that part after subtracting the part already become conscious (i. e., $\rho - \omega$ whose ratio to the total remainder of Π is $\frac{\rho - \omega}{\rho}$).

The integral equation $\omega = \rho \left(1 - e^{-\frac{rt}{\Pi}} \right)$ wherein e is the base of the natural system of logarithms, as Herbart remarks (Psychology as Science, § 86), "shows us in a perfectly clear manner how ω depends on ρ , r , t , and Π "; or, in other words, how the amount of an idea or concept that is recalled to consciousness, depends on (a) its total amount = Π , (b) the size of the part of it = ρ , which can blend with P , the assisting concept; (c) the portion of $P = r$ which may blend with Π , and on (d) the time elapsed during the operation.

Vaulting and Tapering.

This doctrine of the help given by one concept to another involves the curious phenomenon that Herbart describes (§ 26, p. 21) as vaulting (*Wölbung*) and tapering (*Zuspitzung*). The first effect of the

conscious idea, P, on the unconscious one allied to it, II, is to bring the latter into consciousness in general without accurate discrimination of the part ρ which may blend with the part r . But time being given, the other portions of II incongruent with r are arrested and sent back, and thus the assisted idea is arched, figuratively speaking, in such a manner that its part ρ is the top of the arch and extends into consciousness. By the further action of separating ρ from the remainder of II, the arch becomes more and more pointed, until finally, only ρ remains in consciousness and all the rest of II has been arrested and sunk from view. The reader, therefore, will find it necessary to learn how to interpret readily this figurative expression which Herbart uses, technically, into the description of the process of apperception—the first part of the process identifying wholes which do not perfectly blend, and the later steps of the process eliminating more and more the portions which can not blend, and thus “arching” the portion of II which can blend, until at last there is left only the pure ρ which unites completely with r , and the pointing is accomplished.

HERBART'S PLACE IN THE HISTORY OF PHILOSOPHY.

From the point of view of apperception the anomalous position of Herbart's system in the history of philosophy may be explained—or rather the anomaly may be removed.

All modern philosophy in general has for its problem the exploration of the subjective factor in knowledge, as the Greek philosophy sought to discover the objective factor. Thus modern philosophy has a psychological tendency, while ancient philosophy had

an ontological tendency. The former asks for the subjective coefficient in cognition, while the latter asks the necessary conditions of true being.

If apperception be divided into two kinds—first, that dependent on the nature of the mind itself, and, second, that dependent on the acquired experience of the mind*—then we may say that Herbart undertakes to explore the second field of apperception, while Kant explores the first. Kant seeks to explain the apperception which arises through the logical structure of intelligence itself—that is to say, through the *forms of the mind*. These forms of the mind are the *a priori* intuitions of time and space and the categories of quantity, quality, relation (including inherence and causality), and modality. Fichte, Schelling, Hegel, and others followed the lead of Kant, and in the sequel there arose as complete a view of the world from the subjective standpoint as there had been from the objective standpoint of the Greeks. The psychologic theory of the world duplicated the ontologic theory, and the insight of Hegel into this identity of the two world-solutions is the greatest triumph in the entire history of human thought.

Herbart, rising in the midst of the great ferment of thought that surrounds the advent of Kantianism, seems to be unaffected by it. This, however, is seeming rather than truth. For he deals with the problem of his time, and takes the Kantian question back to the place where Leibnitz had left it. "Nothing in the intellect that was not previously in sense-perception" had been the motto of the psychologists who like Locke

* See Lazarus's *Das Leben der Seele*.

explained all thinking as a modified sensation. But Leibnitz added the limitation, "Nothing except the intellect itself"—that is to say, the structure of the mind itself is not and can not be derived from sense-perception, but must be there before in order to render such perception possible. The knowing faculty must have a structure or constitution of its own, and this structure must furnish an element or factor in the product of knowledge. Leibnitz was the first to use the word *apperception* in a philosophic sense. The French verb *apercevoir* signifies *to perceive*, and *s'apercevoir* signifies *to notice with attention*. But Leibnitz distinguishes *perception* from *apperception* in the fact that the latter is a knowledge that brings with it a reflection upon the interior nature of the soul, and he explains this reflection (*actes réflexifs*) as having for its object "the ego, substance, self-existence (*monade*), soul, and spirit, in a word immaterial things and truths." Such knowledge he calls self-consciousness.* Self-consciousness ("conscience") he explains as that reflective act which gives us a knowledge of the Ego and of the true being of God—in short, a knowledge of the structure of mind, or Reason. Here we see that Leibnitz meant by *apperception* almost exactly what Kant describes as the "transcendental unity of *apperception*," making allowance for the acute and protracted analysis of Kant, who expands the brief mention of Leibnitz into three extensive treatises.

Herbart starts with the fertile suggestion of Leib-

* See Principles of Nature and Grace, §§ 4, 5; also The Monadology, § 14, and especially §§ 29, 30, in which he explains the object of *la conscience*.

nitz and moves off in the direction of the sensation-
alists, who like Locke explain all by means of sense-
perception. But Herbart takes with him also Leibnitz's
idea of the soul as a monad; omitting, however, the
important attribute of self-activity, which endows
Leibnitz's monad ("natural changes that proceed from
an internal principle," "which change is perception"
—*Monadology*, §§ 11, 12). In the place of this self-
activity Herbart places a sort of mechanical action
and reaction (*Druck* and *Gegendruck*) in direct oppo-
sition to the doctrine of Leibnitz (*Monadology*, § 7),
who denies the possibility of mechanical interaction
between independent beings.

In the history of philosophy all systems are profit-
able lessons in the comprehension of human thought.
If true systems, they help us to see the positive road;
if false, they stand as guide-posts which warn the
traveler not to take the by-paths leading *ad absurdum*.
Herbart's system may undertake to explain too much
by the ideas of mechanical action and reaction; or
perhaps, on the other hand, it may be truly said that
he never intended his "pressure, counter-pressure, and
self-preservation" to be taken in a mechanical sense.
But whatever he has done is worthy of being faith-
fully studied and mastered, if for no other reason than
for the discipline that he gives us in the habit of re-
ferring all mental phenomena to the act of appercep-
tion for their explanation.

In conclusion, I present the analysis of Steinthal
(one of the ablest of the thinkers who have followed
Herbart), in which he gives the essential elements of
the act of apperception in its four stages:

1. Identification—as in the case where we recog-

nize the person before us to be the same we have known.

2. Classification—as in the case where we recognize the object before us to be an individual of a class well known to us.

3. Harmonizing or reconciling apperception—wherever we unite two opposed or incongruent concepts (as, for example, the concept of something that has existed and served our purposes with the concept of the same thing as changed and destroyed—a friend who has died; a house that has been burned, etc.).

4. Creative or formative apperception—which makes combinations, poetic or scientific—inductive or deductive discoveries, solutions of enigmas, illusions and hallucinations. In this sort of apperception the mind creates the apperceiving factor.

The old doctrine of “association of ideas,” which, since the time of Locke, has furnished one of the most dismal chapters in “mental philosophy,” so-called, is to be supplanted by this new doctrine of apperception.

It has been asked, Why employ this bizarre technical term for what we can express in terms already familiar to us? The answer is, that the word apperception has no synonym already become familiar to us. It is a term for a new idea—a synthesis of many other ideas variously expressed already by such words as assimilate, associate, identify, recognize, explain, interpret, comprehend, classify, subsume, conception, elaboration, thought, etc.

The association of ideas looks merely to their connection, which may be a matter of accident. But apperception looks to the modification of ideas one

through the other, and hence leads to the process of formation of ideas, which is the central point of interest in psychology and education.

I append a note giving some information as to the bibliography of this subject.

W. T. HARRIS.

WASHINGTON, D. C., *August*, 1891.

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The student who desires to pursue this subject further may be referred to the following lists of books selected out of the immense literature that has grown up round the theme :

I. *The Philosophers :*

M. W. DROBISCH : *Empirische Psychologie nach naturwissenschaftlicher Methoda*. [Drobisch has labored with most success on the mathematical phase of Herbart's system.]

M. LAZARUS : *Das Leben der Seele*, etc.

H. STEINTHAL : *Einleitung in die Psychologie und Sprachwissenschaft*. [Messrs. Lazarus and Steinthal have applied Herbart's ideas of apperception with distinguished success in the province of comparative philology, and their grasp of this important thought seems to me a great advance in philosophic clearness over the exposition made by Herbart himself.]

W. WUNDT : *Grundzüge der Physiologischen Psychologie*. [For independent criticism of Herbart's doctrines and an able restatement of doctrines approved by him.]

T. FECHNER : *Revision der Hauptpunkte der Psychophysik*. [This contains Fechner's review of the existing status of scientific investigation into the quantitative measurement of the intensity of sensations by reference to the force of different stimuli, and was written on the occasion of G. E. Müller's critique of his earlier works.]

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INTRODUCTION BY THE TRANSLATOR.

At the time of Herbart's death, August 11, 1841, it was said of him that he was a man to be appreciated only after centuries had passed away. The world has moved more rapidly than was anticipated, so that, after a lapse of barely fifty years, a very general appreciation of Herbart's psychological and pedagogical work prevails. Since the time of Locke no man has done so much for psychology.

In America, it is true, the number of educators who have any useful knowledge concerning the Herbartian system is somewhat limited; yet in the current philosophical and educational literature may be found occasionally a brief mention, which is probably an indication of the broader study that is yet to follow.

The design of the present translation is not so much to furnish information as to awaken an interest which may develop a desire for a clearer insight into principles that seem to form the best foundation that has yet been discovered for a rational system of scientific pedagogy.

Herbart believed that a knowledge of psychology is of the first importance to the teacher. To ignorance of the subject he attributed the many errors and gaps existing in pedagogical knowledge and practice. He opposed the theory that the soul is composed of

faculties which are born with the child and which constitute a great part of its mental organization. This, as well as the theory of the higher and lower inherent capabilities of the soul, he regarded as belonging to that which might be termed psychological myth rather than to scientific psychology. He held that the doctrine of the faculties is proved through metaphysics to be untenable. He argued that the fundamental principle upon which a possibility for psychological investigation rests lies in the fact that at the bottom of all psychological phenomena is a real existence, the soul, which he regarded as an absolutely simple existence, without any inherent powers or talents.

He believed representations or concepts * to be the elements of the united psychical life, and regarded them as the soul's acts of self-preservation. Owing to the simplicity or singleness of the soul, its separate acts of self-preservation must be single as well. All the remaining facts or manifestations of consciousness he regarded as the results of the combinations of concepts, and of their alternate action and reaction upon one another.

He believed that the effective forces of the mental life consist, not in fictitious faculties, but in concepts in the soul.

To concepts, in their action and interaction upon one another, he ascribed all the capacities usually attributed of faculties. Concepts working in combi-

* The term concept as employed here does not, as is usual with the English metaphysicians, indicate the general notion, but the individual presentation formed through the process of perception—e. g., the concept of a house, a tree, etc.

nation with, and in opposition to one another furnish explanations of the phenomena of thinking, feeling, desiring, willing, etc. The general principles underlying the above-mentioned operations may be illustrated or indicated by mathematical calculations.

Upon the theory of the existence of concepts in the soul, which are susceptible of a variety of combinations, Herbart's psychology treats first of presentations or sensations—e. g. of size, form, color, etc.; and, secondly, of concepts formed through the combinations of these sensations—e. g., concepts of a house, a tree, a man, etc. This is to be distinguished from the general notion—house, tree, man, etc.

In connection with the above may be considered psychical states—e. g., thought, feeling, desire, interest, etc.—which are the results of the action and interaction of concepts, and which are determined by laws that may be indicated through mathematical formulæ.

The unity of the soul is the easily comprehensible metaphysical explanation of the tendency of concepts, in meeting together, to resist or arrest one another, and, so far as they are not opposed to one another, to combine into a whole.

This resistance or arrest implies neither distinction from nor change in the concept. The effect is merely that the weaker presentation, or concept, is partially or totally removed out of consciousness, while the stronger is raised into clearness. The word consciousness here indicates the totality of all simultaneous concepts. As soon as the resistance weakens, or, through an opposing force, becomes ineffective, the removed concept has a tendency within itself to return into consciousness.

Concepts are said to be in equilibrium when there occurs among them a sufficiency of force to place them equally in a condition of arrest. This condition indicates a very gradual change from clearness to obscurity. The change in the grade of obscurity to which it is subject is called the movement of the concept.

In a so-called "statics and mechanics" of the mind, Herbart has indicated the equilibrium and movement of concepts by mathematical formulæ, with a view to illustrating the simplest psychical laws with scientific exactness.

The result of the arrest of concepts must be subject to modifications on account of the different degrees of strength possessed by concepts, as well as of their different grades of resistance, together with the consequent differences in their combinations.

By computation, Herbart reached the conclusion that, in the case of two concepts, one can never become entirely obscured by the other, but in the case of three or four, etc., one may become obscured very easily, and its constant effort to recover itself being unobserved, it may be as ineffective as if it were not present.

Concepts are said to combine in two ways: those which are not opposed to one another, so far as they are unrestricted, unite in what is called a complex; while those which are opposed become blended or fused together, so far as they do not suffer from reciprocal arrest.

Through this tendency to blend, concepts entering consciousness in succession become connected, and thus longer or shorter concept series are formed. The law according to which a concept released from arrest, as it returns to consciousness, strives to bring with it

those with which it is connected, is of special importance.

The theory of the mechanism of memory is largely based upon the construction of the concept series.

Though Herbart did so much for the development of psychology, he was convinced that all possible investigations are quite insufficient to furnish a thorough knowledge of the subject, and seems to have believed that psychology can only be regarded as a science on condition that a large part of it be "relegated to the unknown." He also held that psychology must remain incomplete and inadequate so long as it considers merely the psychical phenomena of the individual man. He believed that society wherever organized is subject to psychical laws peculiar to itself. In society the individual in his relations to the whole corresponds to the concept in its relation to the psychical organism of which it is a member. Upon this assumption he formulated a statics and mechanics of the state in a way corresponding to the statics and mechanics of the mental life.

To the mere reader of psychology, the Herbartian theories may at first appear peculiar, and in the minds of some may verge upon the absurd; but the careful student will probably find no psychological theories that are so well calculated to stand the test of actual experience.

THE HERBARTIAN PEDAGOGY.

Herbart regarded concepts in their action and reaction upon one another as the source of the psychical life, and believed that, without regular systematic instruction, mental activity must be irregular and in-

definite, while the results are more or less worthless. The mental processes, the laws of which the teacher should thoroughly understand, are: perception, reproduction, and apperception. A rule upon these processes has been given, which enjoins clear perception, exact reproduction, and thorough apperception.

In this connection these processes are exercised in the four steps of instruction, viz.:

1. Clearness.
2. Comparison (association).
3. System.
4. Philosophical method or application.

According to Herbart, the aim of education is ethical—i. e., the moral development of the individual. Everything lower than this is valueless except as it serves to secure this end.

This end is to be secured through discipline, training, and instruction.

Discipline has a twofold task: First, negative; the suppression of the natural impatience of restraint and wildness of the child. Second, positive; the care of the soul in its intellectual, moral, and spiritual development.

Training consists in directing the attention to desirable objects of study, and in fixing the results of that which is learned.

Instruction does not merely imply putting the child in possession of technical skill, but it rather implies the training of the child in the observation of relations, and must result in power to recognize underlying principles, and to appreciate æsthetic and ethical relations.

One of the tasks of instruction is to awaken in the

child a many-sided interest which will fit the future man to make himself at home in any society or in any country, and will enable him to adapt himself to any change of circumstances, as well as make him ready in resources that will be equal to any emergency. This many-sided interest may be secured through the development of two groups of interests: First, the interests of knowledge, viz., empirical, speculative, and æsthetic interests; second, the interests of participation, viz., sympathetic, social, and religious interests.

The development of the interests of the first group depends largely upon the child's experience in connection with material objects, or with the world around him, while the development of the interests of the second group depends upon the child's experience in connection with his fellow-creatures.

The first condition of instruction in any subject is attention, which is almost synonymous with interest. Attention is of two kinds, involuntary and voluntary. Involuntary attention is classified into primitive and apperceiving attention.

The course of instruction is either analytic or synthetic.

Here we shall leave the description of Herbart and his work, with the hope that the teachers of America may have an early opportunity of availing themselves of a system at once clear, simple, and rational, and in every respect calculated to supply our lack in the direction of philosophical pedagogy.

To those who may be still uncertain regarding a system of which so little is as yet known, Herbart's declaration of his fundamental principle may be presented: "I stand, not upon the single point of the

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Ego, but upon a foundation as broad as universal experience."

In closing, the translator takes this opportunity to acknowledge her indebtedness to Dr. William T. Harris. But for his kindly patience the publication of the book must have been deferred to a much later date.

Also thanks are due to Prof. Otto H. L. Schwetzky, who always readily gave such aid as could only be rendered by one possessing a thorough knowledge of German language and thought.

MARGARET K. SMITH.

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HERBART'S PSYCHOLOGY.

INTRODUCTION.

1. THE material of psychology may be gained from inner perception, intercourse with men of different degrees of development, the observations of educators and statesmen, the writings of travelers, historians, poets, and moralists, and finally from observations on insane people, sick people, and the lower animals. The work of psychology is not merely to collect this material, but to make the total of inner experience comprehensible, while it is the work of the philosophy of nature to accomplish the same in regard to outer experience limited as it is by space-conditions. As the two circles of experience are different and yet united, so also are the two sciences. In respect to their fundamental ideas, they depend in common upon general metaphysics, yet psychology has this peculiar relation to the latter, that many questions, which upon occasion arise in metaphysics and then must be postponed, are answered in psychology. For this reason the treatise on psychology may very well be allowed to precede that on metaphysics, and in this way the metaphysical idea of the soul (the substance of the mind) may be dispensed with at first. By this the beginner lightens his task, partly because he can tarry longer in

the circle of experience, and partly because the manifold relations of psychology to morals, pedagogy, politics, philosophy of history, and to art, heighten the interest of the study.

2. That concepts (*Vorstellungen*=ideas or representations) are received through the senses, preserved by the memory, reproduced by the imagination, and anew combined; that the understanding (*Verstand*) shows itself in the understanding of a language or an art; the Reason (*Vernunft*) in perceiving reasons and counter-reasons; this generally received opinion has been adopted and carried out by psychologists, and the distinction between the beautiful and the ugly has been assigned to the æsthetic judgment, the passions to the faculty of desire, the emotions to the faculty of feeling. The opinion is, that these faculties are always to be found together in every man; but the great contest over the explanation and classification of faculties must long ago have brought to notice the fact that psychology needs another branch of investigation in which at the beginning the attention must be directed toward changing conditions. These changes (but not those faculties) we experience directly in ourselves.

3. A preliminary comparison of psychology with the three principal branches of natural science is useful. Natural history may first present individual examples of the objects which it afterward classifies; it may enumerate definitely the characteristics perceived. Now, inasmuch as a regular process of abstraction is possible, beginning with the individuals and ascending toward the species and genera [by omitting one after another the characteristics that differentiate the individuals from the species, and the lower classes from

the higher], it follows that we have before us these characteristics [omitted in the process of rising to the abstract classes], and can add them as we descend to the concrete. When these logical operations are properly performed, and ascent is made from the concrete to the abstract, and descent from the abstract to the concrete, no one is misled into supposing the abstract to be anything real. Everybody knows the abstract terms to be mere devices of thought, invented by it for the purpose of conveniently surveying at a glance the manifold objects of nature.

On the contrary, no material of facts lies at the foundation of psychology, spread out before the eyes so that it can be definitely shown and classified into subordinate and higher classes without any gaps in the series. Self-observation mutilates the facts of consciousness even in the act of seizing them; it wrests them from their natural combinations and delivers them over to a restless process of abstraction which finds a point of repose only when it has reached the ultimate species—namely, conception, feeling, and desire. Under these three general classes, by definitions (a method precisely opposite to that of empirical science), it subsumes the mental facts observed so far as it can be done. Now, if to these vague and unscientific classifications there be added a theory of mental faculties which we are supposed to possess, then psychology is changed into a mythology in which no one will confess a serious belief, but upon which the most important investigations are made dependent, so that, if this foundation were removed, nothing clear would remain.

NOTE.—It is noteworthy that in psychology the highest ideas are the clearest; the lower, however, are always obscure. Thus

for some time we have been tolerably (though not entirely) united in regarding the three classes, conception, feeling, desire, as the ultimate species of mental faculties, but the discrimination of the emotions from the passions is of later origin, and even yet has not thoroughly penetrated the usages of speech: if we ask exhaustively about the kinds of memory, as memory of place, memory of names, memory of things, etc., no one undertakes to name for us in reply all the classes, nor are the poetic, the mathematical, and the military imaginations discriminated from one another, although manifest differences are to be found among men in this respect. By this indefiniteness in the subordinate classes, it may be perceived at once that the original apprehension of psychological facts is so inexact that it admits of no pure natural history of the mind. Nevertheless, on account of the customs of speech already established, in our logical review of empirical psychology we shall sometimes make use of the customary names.

4. Empirical physics, though it has not as yet discovered the real forces of nature, has learned certain laws according to which phenomena take place. By recalling the latter, a connection in the variety of phenomena is perceived. Experiments with artificial apparatus and the application of mathematics aid greatly in the discovery of these laws.

Psychology can not experiment with men, and there is no apparatus for this purpose. So much the more carefully must we make use of mathematics; by it scientific accuracy is gained for the fundamental ideas; then the work of referring individual cases to the law begins. Suppose, for example, that one has the idea of the tension of opposed concepts; then we go back to the different conditions possible in this, among others to the difference in mental states. In this way the rules of reproduction are first learned, according to which, in the concept series, every concept

presents itself between others; then we go back to the space-and-time constitution of sensuous objects and to the logical aspect of ideas.

5. In the observation of animal life, physiology makes use of three principal ideas, viz., vegetation [i. e., nutrition or assimilation], irritability [i. e., reaction against foreign influences], and sensibility. We may attempt to compare the faculty of feeling with sensibility, the faculty of desire with irritability, the faculty of concepts with vegetation; then we see that this analogy gives a little light inasmuch as vegetation continues during sleep while sensibility disappears, and through the refreshment (of sleep) the irritability of the muscles gains new force. Duration also belongs to concepts. When they are once perfected to the extent of definite knowledge they remain to old age, while feelings and desires change and weaken. Moreover, vegetation is the foundation of bodily life, as concepts are the foundation of the mental life. But the analogy must not be carried too far. In plants only vegetation exists, there being no perceptible sensibility and irritability (or reaction against environment) save with the rarest and most imperfect exceptions. On the contrary, representation, feeling, and willing, are constantly to be found in combination. And, besides this, the whole mental existence of man is immeasurably more changeable than any object of physiology whatever.

6. If we regard man with a speculative glance sharpened by the fundamental ideas of metaphysics, we find him to be an aggregate of contradictions. Inner experience has not the least claim to more value than the outer, notwithstanding all that enthusiasm for inner observation has imagined and may still imagine to be of

special truth and value, and which it is impossible to wrest from those who wish to believe therein. On the other hand, a field of investigation is disclosed by which empirical material is elaborated into true knowledge, a result which in empirical psychology, on account of its indefiniteness and instability, is more difficult to accomplish than in many other parts of human experience.

All mental life, as we observe it in ourselves and others, is shown to be an occurrence in time, a constant change, a manifold of unlike conditions combined in one, finally a consciousness of the Ego and the non-Ego, all of which belong to the form of experience and are unthinkable [as its content]. Even the difficulties in regard to material existence are not far away, for we know the mind of man only in combination with the body, and mere experience can not determine whether the separation of the one from the other actually occurs.

7. The readiest solution of these problems is found in general metaphysics, but further elaboration from a psychological standpoint demands, besides this, higher mathematics, inasmuch as the concepts must be regarded as forces whose effectiveness depends upon their strength, their oppositions, and their combinations, all of which are different in degree.

8. In such a simple, almost popular, presentation as is proposed here, the old hypothesis of mental faculties can not be entirely dispensed with, for that hypothesis is a work of ages, and indicates the nearest approach attainable by natural effort to bring together the mental life of man into one picture. It is a tradition which reflects the total impression of all psycho-

logical observations; guided by it, we shall sketch the outlines of empirical psychology, and, in order to make the necessity for an explanation of the facts perceptible, shall note its most striking effects.

NOTE.—The whole treatise will be divided into the following principal parts:

Part I. Fundamental Theories.

Part II. Empirical Psychology.

Part III. Rational Psychology.

9. A work of Carus is extant upon the history of psychology, the third volume of which is composed of his posthumous writings.

NOTE.—It may be briefly stated here, but not shown in detail, that in modern times psychology has rather gone backward than forward. In regard to this science, Locke and Leibnitz were both upon a better path than that along which we have been led by Wolff and Kant. The two latter advocate in a peculiar manner the discrimination of mental faculties, and for this reason must be classed together, however much they differ from each other in other respects. Wolff had in mind the logical task of classifying mental phenomena, without troubling himself more closely with their inner origination, and for this reason he is unequaled in the thoughtlessness with which he covers up the greatest difficulties with mere verbal definitions. Kant makes use of the hypothetical mental faculties to present his investigations clearly according to form, that he might accompany human knowledge in its progress from the senses to the understanding and the reason, and it is not easy to rid his writings of this hypothesis.

It is not our purpose to mention here later errors, since in empirical psychology one will be inclined to relate a second time. facts which every person knows already, or, with a pretended gift for observation into his own inner life, will have made discoveries which others can not find in themselves, or will have effaced from psychology here a metaphysical, there an ethical, here a religious, there a physiological color by which either the

mutual limitations or the combinations of science are disregarded, while the source of the psychical mechanism remains entirely hidden. But this one thing may be said, that psychology can not portray the beautiful. Its work is not to admire, but to explain; not to exhibit curiosities, but to make man as he is generally comprehensible; neither to raise him to heaven, nor to fix him immovably in the dust; not to close the lines of investigation, but to open them.

PART FIRST.

FUNDAMENTAL PRINCIPLES.

CHAPTER I.

THE CONDITION OF CONCEPTS, WHEN THEY ACT AS FORCES.

10. CONCEPTS become forces when they resist one another. This resistance occurs when two or more opposed concepts encounter one another.

At first let us take this proposition as simply as possible. In this connection, therefore, we shall not think of complex nor of compound concepts of any kind whatever; nor of such as indicate an object with several characteristics, neither of anything in time nor space, but of entirely simple concepts or sensations—e. g., red, blue, sour, sweet, etc. It is not our purpose to consider the general notions of the above-mentioned sensations, but to consider such representations as may result from an instantaneous act of sense-perception.

Again, the question concerning the origin of the sensations mentioned does not belong here, much less has the discussion to do with the consideration of anything else that might have previously existed or occurred in the soul.

The proposition as it stands is that opposed concepts resist one another. Concepts that are not op-

posed—e. g., a tone and a color—may exist, in which case it will be assumed that such concepts offer no resistance to one another. (Exceptions to this latter proposition may occur, of which more hereafter.)

Resistance is an expression of force. To the resisting concept, however, its action is quite accidental; it adjusts itself to the attack which is mutual among concepts, and which is determined by the degree of opposition existing between them. This opposition may be regarded as that by which they are affected collectively. In themselves, however, concepts are not forces.

11. Now, what is the result of the resistance mentioned?

Do concepts partially or wholly destroy one another, or, notwithstanding the resistance, do they remain unchanged?

Destroyed concepts are the same as none at all. However, if, notwithstanding the mutual attack, concepts remain unchanged, then one could not be removed or suppressed by another (as we see every moment that they are). Finally, if all that is conceived of each concept were changed by the contest, then this would signify nothing more than, at the beginning, quite another concept had been present in consciousness.

The presentation (concept), then, must yield without being destroyed—i. e., the real concept is changed into an effort to present itself.

Here it is in effect stated that, as soon as the hindrance yields, the concept by its own effort will again make its appearance in consciousness. In this lies the

possibility (although not for all cases the only ground) of reproduction.

12. When a concept becomes not entirely, but only in part, transformed into an effort, we must guard against considering this part as a severed portion of the whole concept. It has certainly a definite magnitude (upon the knowledge of which much depends), but this magnitude indicates only a degree of the obscuration of the whole concept. If the question be in regard to several parts of one and the same concept, these parts must not be regarded as different, severed portions, but the smaller divisions may be regarded as being contained in the larger. The same is true of the remainders after the collisions—i. e., of those parts of a concept which remain unobscured, for those parts are also degrees of the real concept.

CHAPTER II.

EQUILIBRIUM AND MOVEMENT OF CONCEPTS.

13. WHEN a sufficiency of opposition exists between concepts, the latter are in equilibrium. They come only gradually to this point. The continuous change of their degree of obscuration may be called their movement.

The statics and mechanics of the mind have to do with the calculation of the equilibrium and movement of the concepts.

14. All investigations into the statics of the mind

begin with two different quantitative factors, viz., the sum (or the aggregate amount) of the resistances and the ratio of their limitation. The former is the quantity which rises from their encounter, to be divided between the opposing concepts. If one knows how to state it, and knows also the ratio in which the different concepts yield in the encounter, then, by a simple calculation in proportion, the statical point of each concept—i. e., the degree of its obscuration in equilibrium—may be found.

15. The sum as well as the ratio of the mutual limitation depends upon the strength of each individual concept which is affected in inverse ratio to its strength, and upon the degree of opposition between the two concepts. For their influence upon each other stands in direct ratio to the strength of each.

The principle determining the sum of the mutual limitation is, that it shall be considered as small as possible, because all concepts strive against suppression, and certainly submit to no more of it than is absolutely necessary.

16. By actual calculation, the remarkable result is obtained that, in the case of the two concepts, the one never entirely obscures the other, but, in the case of three or more, one is very easily obscured, and can be made as ineffective—notwithstanding its continuous struggle—as if it were not present at all. Indeed, this obscuration may happen to a large number of concepts as well as to one, and may be effected through the agency of two, and even through the combined influence of concepts less strong than those which are suppressed.

Here the expression “threshold of consciousness”

must be explained, as we shall have occasion to use it. A concept is in consciousness in so far as it is not suppressed, but is an actual representation. When it rises out of a condition of complete suppression, it enters into consciousness. Here, then, it is on the threshold of consciousness. It is very important to determine by calculation the degree of strength which a concept must attain in order to be able to stand beside two or more stronger ones exactly on the threshold of consciousness, so that, at the slightest yielding of the hindrance, it would begin to rise into consciousness.

NOTE.—The expression “A concept is in consciousness” must be distinguished from that, “I am conscious of my concept.” To the latter belongs inner perception; to the former not. In psychology, we need a word that will indicate the totality of all simultaneous actual presentations. No word except consciousness can be found for this purpose.

Here we are obliged to be content with a circumlocution—and this all the more, because the inner perception which is usually attributed to consciousness has no fixed limit where it begins or ceases, and, moreover, the act of perceiving is not itself perceived; so that, since we are not conscious of it in ourselves, we must exclude it from consciousness, although it is an active knowing, and in no way a restricted or suppressed concept.

17. Among the many, and, for the most part, very complicated laws underlying the movement of concepts, the following is the simplest:

While the arrested portion (*Hemmungssumme*) of the concept sinks, the sinking part is at every moment proportional to the part unsuppressed.

By this it is possible to calculate the whole course of the sinking even to the statical point.

NOTE.—Mathematically, the above law may be expressed:
 $\sigma = S \left(1 - e^{-t} \right)$ in which S = the aggregate amount sup-

pressed, t = the time elapsed during the encounter, σ = the suppressed portion of all the concepts in the time indicated by t .

As the latter quantity is apportioned among the individual concepts, it is found that those which fall directly beneath the statical threshold (16) are very quickly driven there, while the rest do not reach exactly their statical point in any given finite time. On account of this latter circumstance, the concepts in the mind of a man of most equable temperament are, while he is awake, always in a state of gentle motion. This is also the primary reason why the inner perception never meets an object which holds it quite motionless.

18. When to several concepts already near equilibrium a new one comes, a movement arises which causes them to sink for a short time beneath their statical point, after which they quickly and entirely of themselves rise again—something as a liquid, when an object is thrown into it, first sinks and then rises. In this connection several remarkable circumstances occur :

19. First, upon an occasion of this kind, one of the older concepts may be removed entirely out of consciousness even by a new concept that is much weaker than itself. In this case, however, the striving of the suppressed concept is not to be considered wholly ineffective, as shown above (see 16) ; it works with all its force against the concepts in consciousness. Although its object is not conceived, it produces a certain condition of consciousness. The way in which these concepts are removed out of consciousness and yet are effective therein may be indicated by the expression, "They are on the mechanical threshold." The threshold mentioned above (16) is called for the sake of distinction the statical threshold.

NOTE.—If the concepts on the statical threshold acted in the same way as on the mechanical threshold we should find ourselves in a state of the most intolerable uneasiness, or rather the body would be subjected to a condition of tension that must in a few moments prove fatal, even as under present conditions sudden fright will sometimes cause death; for all the concepts which, as we are accustomed to say, the memory preserves, and which we well know can upon the slightest occasion be reproduced, are in a state of incessant striving to rise, although the condition of consciousness is not at all affected by them.

20. Second, the time during which one or more concepts linger upon the mechanical threshold can be extended if a series of new, although weaker, concepts come in succession to them.

Every employment to which we are unaccustomed puts us in this condition. The earlier concepts are pressed back of the later ones. The former, however, because they are the stronger, remain tense, affect the physical organism more and more, and finally make it necessary that the employment cease, when the old concepts immediately rise, and we experience what is called a feeling of relief which depends in part upon the physical organism, although the first cause is purely psychological.

21. Third, when several concepts are driven in succession to the mechanical threshold, several sudden successive changes in the laws of reciprocal movements arise.

In this way is to be explained the fact that the course of our thoughts is so often inconsequent, abrupt, and apparently irregular. This appearance deceives in the same way as the wandering of the planets. The conformity to law in the human mind resembles exactly that in the firmament.

NOTE.—As a counterpart to the concepts which sink simultaneously are to be observed those which rise simultaneously, especially when they rise free—i. e., when a restricting environment or a general pressure suddenly disappears. With the rising the amount of suppression increases. Hence, in the case of three, one may be, as it were, bent back, and under certain conditions may sink quite to the threshold. Their elevation is greater than the depression to which, sinking together, they would have pressed one another, because in sinking the sum of their mutual limitation depends upon the total strength; which in the gradual rising is not the case.

CHAPTER III.

COMPLICATIONS AND BLENDINGS.

22. THE easily conceivable metaphysical reason why opposed concepts resist one another is the unity of the soul, of which they are the self-preservations. This reason explains without difficulty the combination of our concepts (which combination is known to exist). If, on account of their opposition, they did not suppress one another, all concepts would compose but one act of one soul; and, indeed, in so far as they are not divided into a manifold by any kind of arrests. whatever, they really constitute but one act. Concepts that are on the threshold of consciousness can not enter into combination with others, as they are completely transformed into effort directed against other definite concepts, and are thereby, as it were, isolated. In consciousness, however, concepts combine in two ways: First, concepts which are not opposed or

contrasted with one another (as a tone and a color) so far as they meet unhindered, form a complex; second, contrasted concepts [e. g., red and yellow], in so far as they are affected neither by accidental foreign concepts nor by unavoidable opposition, become blended (fused).

Complexes may be complete; blendings (fusions) from their nature must always be (more or less) incomplete.

NOTE.—Of such complexes as are partially or almost complete, we have remarkable instances in the concepts of things with several characteristics and of words used as signs of thoughts. In the mother-tongue the latter, words and thoughts, are so closely connected that it would appear that we think by means of words. (Concerning both examples more hereafter.) Among the blendings are especially remarkable, partly those which include in themselves an æsthetic relation (which, taken psychologically, is created at the same time with the blending), partly those which involve succession, in which serial forms have their origin.

23. That which is complicated or blended out of several concepts furnishes an aggregate of force, and for this reason works according to quite other statical and mechanical laws than those according to which the individual concepts would have acted. Also the thresholds of consciousness change according to the complex or blending (fusion), so that on account of a combination a concept of the very weakest kind may be able to remain and exert an influence in consciousness.

NOTE 1.—The computation for complexes and blendings depends upon the same principles as that for simple concepts; it is, however, much more intricate, especially for the reason that

in the case of incomplete combinations the forces as well as their arrests are only partially interwoven with one another (and do not fully enter as factors into the product).

NOTE 2.—Combinations of concepts consist not only of two or three members, but they often contain many members in very unequal degrees of complication, or blending, in which case no calculation can estimate the multiplicity. Nevertheless, from the latter, the simplest cases may be chosen and the more intricate ones estimated according to them. For every science the simplest laws are the most important.

24. *Problem*: After an encounter between two concepts, P and Π , the remainders, r and ρ , are blended (or incompletely united). The problem is to indicate what help one of the two concepts, in case it should be still more suppressed, would receive from the other.

NOTE.—*Solution*: Let P be the helping concept; it helps with a force equal to r , but Π can only appropriate this force in the ratio of $\rho : \Pi$. Hence through P, Π receives the help $\frac{r\rho}{\Pi}$, and in the same way P receives from Π the help $\frac{r\rho}{P}$.

The proof lies immediately in the analysis of the ideas. It is plain that the two remainders, r and ρ , taken together, determine the degree of union between the two concepts. One of them is the helping force; the other, compared with the concept to which it belongs, is to be considered as a fraction of the whole; and, of the totality of help which could be rendered by the first remainder, it yields that portion which here attains efficient activity.

25. The following principles may be observed here:

a. Beyond the point of union no help extends its influence.

If the concept Π has more clearness in consciousness than the remainder ρ indicates, then by the striving of the concept P , which might come to the help of the former, already more than enough has been done; hence for the present it exerts no more influence.

b. The farther the one of the concepts is below the point of union, so much the more effectively does the other help.

NOTE.—This gives the following differential equation :

$$\frac{r\rho}{\Pi} \frac{\rho - \omega}{\rho} dt = d\omega,$$

whence by integration $\omega = \rho \left(1 - e^{-\frac{rt}{\Pi}} \right)$

This equation contains the germ of manifold investigations which penetrate the whole of psychology. It is indeed so simple that it can never really occur in the human soul, but all investigations into applied mathematics begin with such simple presuppositions as only exist in abstraction—e. g., the mathematical lever, or the laws of bodies falling in a vacuum. Here merely the influence of the help is considered, which, if everything depended upon it alone, would bring into consciousness during the time t a quantity ω from Π . Besides, if we take into consideration the single circumstance that Π meets with an unavoidable arrest from other concepts, then the calculation becomes so complicated that it can be only approximately solved by an integration of the following form :

$$d^2\omega = ad^2\omega dt + bd\omega dt^2 + c\omega dt^3.$$

It is self-evident that it much more nearly expresses the facts which are to be observed experimentally.

26. The foregoing contains the foundation of the theory of mediate reproduction, which, according to ordinary language, is derived from the association of ideas or concepts. Before pursuing this further we must mention immediate reproduction—i. e., that re-

production which by its own force follows upon the yielding of the hindrances. The ordinary case is that a concept gained by a new act of perception causes the old concept of the same or of a similar object to rise into consciousness. This occurs when the concept furnished by the new act of perception presses back everything present in consciousness opposed to the old concept, which is similar to the new one. Then, without further difficulty, the old concept rises of itself. From this are to be observed the following conditions, which are to be found by calculation, of which, however, no idea can be given here :

a. In the beginning the rising is in proportion to the square of the time, if the new act of perception occurs suddenly; but to the cube of the time, if the latter (as is usual) is formed by a gradual and lingering act of apprehension.

b. The course of the rising is adjusted principally to the strength of the concept furnished by the new act of perception in proportion to the opposing one which it has pressed back; but the individual strength of the rising concept only has influence under special conditions. It can, as it were, only use this strength in the free space which is given to it.

c. The rising concept blends as such with the concept, similar to it, furnished by the new act of perception. Since it does not rise entirely, however, the blending is incomplete.

d. The fact that immediate reproduction is not limited entirely to the old concept of exactly the same kind, but extends to the more or less similar so far as to receive partial freedom from the new act of perception, is of special importance. The whole repro-

duction may be indicated by the name of vaulting (or arching). In the case of a long duration, or of a frequent repetition of a new act of perception, a second important process, which we call tapering (or pointing), follows. The peculiarity of this latter consists in the fact that the concepts which are less similar are again arrested by the concepts received through the new act of perception, as the old concepts bring with them into consciousness others which are opposed to the new, so that finally the concept that is entirely homogeneous finds itself alone favored, and forms, as it were, a tapering summit where the highest point of the vault (or arch) was heretofore.

27. Where the circumstances allow, with this immediate reproduction is united that mediate reproduction mentioned in 25. The concept P, mentioned above, is reproduced immediately (i. e., without the mediation of others), then the free space allowed it may be regarded as that r (spoken of in 25) or as a force which strives to raise the Π blended with it to its point of blending ρ .

NOTE.—As the free space gradually increasing (and again decreasing) is given, we must for the present observation regard r in the formula $\omega = \rho \left(1 - e^{-\frac{rt}{\Pi}} \right)$ as a variable quantity, and indeed as a function of that quantity upon which the propositions in 26 depend.

28. The most important applications of the previous theories are, if with different remainders r, r', r'' , etc., of one and the same concept P several Π, Π', Π'' , etc., are united, by which, for the sake of brevity, we may assume the remainders of the latter, viz., ρ, ρ', ρ'' , to be equal; also, Π, Π', Π'' , etc., may be equal.

A concept acts upon several united with it in the same series according to the time in which its remainders (by which it is united with those others according to quantity) stand.

NOTE.—In order to avoid diffuseness, this most important law is here only very incompletely expressed in words. We recognize it better and more clearly in the formula given:

$\omega = \rho \left(1 - e^{-\frac{r'}{\Pi}} \right)$, if instead of one r we substitute different smaller and greater, r, r', r'' , etc. But the more exact calculation mentioned in 25 shows that the Π, Π', Π'' , etc., blended with them, not only rise, but sink again, as it were, to make place for each other, and in the order of r, r', r'' , etc.

29. Here is discovered the ground of the genuine reproduction or of memory so far as it brings to us a series of concepts in the same order in which they were first received. In order to comprehend this, we must consider what union arises among several concepts that are successively given.

Let a series, a, b, c, d , be given by perception; then, from the first movement of the perception and during its continuance, a is exposed to an arrest from other concepts already in consciousness. In the mean time, a , already partially sunken in consciousness, became more and more obscured when b came to it. This b at first, unobscured, blended with the sinking a ; then followed c , which itself unobscured, united with b , which was becoming obscured, and also with a , which was still more obscured. Similarly followed d , to become united in different degrees with a, b, c . From this arises a law for each of these concepts that states how, after the whole series has been, for a time, removed out of consciousness, upon the re-emergence of one of

the concepts of such a series into consciousness, every other concept of the same series is called up. Let it be assumed that *a* rises first, then it is united more with *b*, less with *c*, and still less with *d*; backward, however, *b*, *c*, and *d* are blended collectively in an unobscured condition with the remainders of *a*; hence *a* seeks to bring them all again into an unobscured condition [i. e., into full consciousness]. But *a* acts the most quickly and strongly upon *b*, more slowly upon *c*, still more slowly upon *d*, etc., by which close investigation shows that *b* sinks again, while *c* rises, even as *c* sinks when *d* rises; in short, the series follows in the same order as first given. On the contrary, let us assume that *c* is originally reproduced, then *c* acts upon *d* and the following members of the series exactly in the same way as was indicated in the case of *a*—i. e., the series *c*, *d*, etc., unfolds gradually in the order of its succession. On the contrary, *b* and *a* experience quite another influence. The unobscured *c* was blended with their different remainders. Then *c* acts upon them with its whole strength, and without delay, but only to call back the remainders of *a* and *b* united with it, to bring a part of *b* and a smaller part of *a* into consciousness. Thus it happens that when we remember something in the middle of a known series, the preceding part of the series presents itself all at once in a lessened degree of clearness, while the portion following comes before the mind in the same order as the series it brings with it. But the series never runs backward; an anagram from a well-comprehended word never originates without intentional effort.

30. Several series may cross one another, e. g., *a*, *b*, *c*, *d*, *e*, and *a*, *β*, *c*, *δ*, *ε*, in which *c* is common to the two

series. If c were reproduced alone, it would strive to call up d and e as well as δ and ϵ . If, however, b comes into consciousness first, then the first series comes decidedly forward on account of the united help of b and c , yet the oppositions among the members of both series, in this case, have each their own influence.

We may remark that, to the simple type or model here given, a variety of complicated psychological occurrences may be adjusted. The same c can be held as the common point of intersection for many hundred series. On account of the manifold oppositions in these series, the common c may cause none of the members to rise perceptibly, but so soon as b and a come forward, determining c more closely, the indecision will disappear, and the uppermost series will really come before the mind.

31. The foregoing depends upon the difference presupposed in the remainders $r, r', r'',$ etc. (28). But in order that this difference may have its influence, the concept to which these remainders belong must come forward sufficiently into consciousness. Let it be granted that it is arrested to such a degree that its active representation amounts to no more than that of the smallest among the remainders $r, r', r'',$ etc., then it works equally on the whole series of concepts blended with it so that a vague total impression of all comes into consciousness. The reason for this is explained in sections 27 and 12. The remainders are not different parts severed from one and the same concept; hence if a little of the latter is in consciousness, we must not first question whether this little may be one and perhaps quite the smallest among those remainders, but we must assume that it really is so, although at

the same time it may be a part of every other greater remainder. If the active concept gradually rises into consciousness, then the remainders, from the smaller to the greater, one after the other, gain a special law of action. By this the above vague impression of the whole rises, in which lies a whole series of concepts, and these are gradually developed out of one another.

NOTE.—Here, among others, must be compared the phenomena resulting from exercise and skill; that, moreover, not every course of thought repeats faithfully the series constructed; and upon that is based, in part, the ground of the inequalities in the quantities Π and ρ (25), with whose possible difference we can not deal further here. Additional facts may be deduced from the following.

32. If free-rising concepts (of which mention was made in the closing remarks of the last chapter) should blend in regular gradation, they would be subject to other laws of reproduction which originate out of the blending, and are distinguished and determined according to their differences. Upon occasion, likewise arises a process of construction and formation of series which differ from the form of analogous concepts in case the latter are given and then sink out of consciousness. From this may be explained the conflict between things as we perceive them and as we think them, as well as the tendency to regard them otherwise than as they first present themselves; consequently the modifying action of the self-activity upon that which lies before the perception. This may be observed especially in the case of children who can have no set purpose in the matter.

CHAPTER IV.

CONCEPTS AS THE SOURCE OF MENTAL STATES.

33. ONE of the objections against mathematical psychology is that mathematics defines only quantity, while psychology must especially consider quality. It is now time to meet this objection, and to collect the explanations of those mental states which the foregoing presents.

Here we must first remark that the peculiar striving of concepts for representation (11) never appears immediately in consciousness, for, just so far as concepts change into striving, they are removed out of consciousness. Also, the gradual sinking of concepts can not be perceived. A special instance of this is, that no one is able to observe his own falling asleep.

So far as it represents or conceives, the soul is called *mind*; so far as it feels and desires, it is called the heart or disposition (*Gemüth*). *The disposition of the heart, however, has its source in the mind*—in other words, feeling and desiring are conditions, and, for the most part, changeable conditions of concepts. The emotions indicate this, while experience, upon the whole, confirms it: the man feels little of the joys and sorrows of his youth; but what the boy learns correctly, the graybeard still knows. The extent, however, to which a *steadfast disposition* and, above all, *character* can be given, will be shown later in the explanations of the principles above presented.

34. First, there is a blending of concepts not only after the arrest (22), but quite a different one before it, provided the degree of opposition (15) be

sufficiently small. A principle of æsthetic judgment lies in this. Pleasant feelings in their narrowest sense, together with their opposites, must be regarded as analogous to these æsthetic judgments—i. e., as springing from the relation of many concepts which do not assert themselves individually, but rather which perhaps, for psychological reasons, can not be perceived when separated.

NOTE.—In carrying out this investigation, the series of tone relations upon which music depends may be presented as a subject of experiment. Among simple tones, the degree of arrest (the interval of tones), entirely alone and without means, determines the æsthetic character of its relation. It is also certain that the psychological explanation (widely different from the acoustical) of all harmony is to be sought in the difference between the degrees of arrest, and that it must be found there. The necessary calculations for this are, for the most part, to be found in the second volume of the Königsberg Archives for Philosophy. Of the somewhat extensive investigations, only the principal ones which experience decidedly confirms can be given here :

When the forces, into which concepts, through their similarity and their contrasts, separate one another, are equally strong, there arises disharmony. If, however, one of these forces be opposed to the others in such a relation that it is driven to the statical threshold (16) by them, then a harmonious relation will prevail.

35. Second, a principle of contrast is to be found in the complexes (22), which we here consider complete. The complexes $a + a$ and $b + \beta$ are similar, provided $a : a = b : \beta$; if not, they are dissimilar. Let the degree of arrest between a and b equal p , and that between a and β equal π . Now, if in similar complexes, $p = \pi$, then, and then only, will the individual

concepts be arrested, exactly as if they had not been in any combination; also no feeling of contrast arises, inasmuch as the arrest is successful only when the opposing forces bring the feeling of contrast with them; but, in every variation from the case presented, the less opposed concepts are affected by their combination with the other two, but in this very way a part of the arrest will be withheld from the latter; consequently, notwithstanding the opposition, something remains in consciousness that resists, and in this lies the feeling of contrast. If $\pi < p$, then the contrast between a and b will be felt, not that between a and β . If $\pi > p$, the case is reversed. When $\pi = 0$, the contrast between a and b is the greatest.

36. Third, a complex $a + a$ is reproduced by a concept furnished by a new act of perception similar to a (26). Now, when a , on account of its combination with a , comes forward, it meets in consciousness a concept opposed to it, β . *Then a will be, at the same time, driven forward and held back.* In this situation, it is the source of an unpleasant feeling which may give rise to *desire*, viz., for the object represented by a provided the opposition offered by β is weaker than the force which a brings with it.

This is ordinarily the case; desires are excited by a remembrance of their object. When the remembrance is strengthened by several incidental concepts, the impulses of desire are renewed. As often as the opposing concepts (i. e., concepts of the hindrances which stand in the way of the longing) attain preponderance, they produce a painful feeling of privation.

37. Fourth, a concept comes forward into consciousness by its own strength (perhaps reproduced

according to the method described in 26), at the same time being called forward by several helping concepts (24). Since each of these helps has its own measure of time in which it acts (according to the formula in 25), then the helps may strengthen one another against a possible resistance, but they can not increase their own velocity. The movement in advancing takes place only with that velocity which is the greatest among several concepts meeting together, *but it is favored by all the rest*. This favoring is part of the process which takes place in consciousness, but in no way is it anything represented or conceived. Hence it can only be called a feeling—without doubt a feeling of pleasure.

Here is the source of the cheerful disposition, especially of joy in successful activity. Here belong various movements, instigated from without, which do not accelerate but favor one another as in the case of dancing and music. Of the same character is the action according to several centering motives, and such too is the insight based on understanding several reasons which confirm one another.

38. In general, it may be observed that feelings and desires have not their source in the process or act of conception in general, but always in certain particular concepts. Hence there may be at the same time many different feelings and desires, and these may either agree or entirely disagree one with the other.

CHAPTER V.

THE CO-OPERATION OF SEVERAL MASSES OF CONCEPTS
OF UNEQUAL STRENGTH.

39. FROM the foregoing, it may, in a way, be perceived that after a considerable number of concepts in all kinds of combinations is present, every new act of perception must work as an excitant by which some will be arrested, others called forward and strengthened, progressing series interrupted or set again in motion, and this or that mental state occasioned. These manifestations must become more complex if, as is usual, the concept received by the new act of perception contains in itself a multiplicity or variety, that at the same time enables it to hold its place in several combinations and series, and gives them a fresh impulse which brings them into new relations of opposition or blending with one another. By this, the concepts brought by the new act of perception are assimilated to the older concepts in such a way as to suffer somewhat after the first excitation has worked to the extent of its power, because the old concepts—on account of their combinations with one another—are much stronger than the new individuals which are added.

40. If, however, already very strong complexes and blendings with many members have been formed, then the same relation which existed between the old and the new concepts may be repeated within between the old concepts. Weaker concepts, which, according to any kind of law, enter into consciousness, act as excitants upon those masses before mentioned, and are

received and appropriated by them (apperceived) just as in the case of a new sense-impression; hence *the inner perception* is analogous to the outer. Self-consciousness is not the subject of discussion here, although it is very often combined with the above.

41. In what has been said, lies that which experience confirms, viz., that the inner perception is never a passive apprehension, but always (even against the will) active. The apperceived concepts do not continue rising or sinking according to their own laws, but they are interrupted in their movements by the more powerful masses which drive back whatever is opposed to them although it is inclined to rise; and in the case of that which is similar to them although it is on the point of sinking, they take hold of it and blend it with themselves.

42. It is worth the trouble to indicate how far this difference among concepts—which we might be inclined to divide into dead and living—may be carried.

Let us recall the concepts on the statical threshold (16). These are, indeed, in effect nothing less than dead; for, in the condition of arrest in which they stand, they are not able by their own effort to effect anything whatever [toward rising into consciousness]. Nevertheless, through the combination in which they stand, they may be reproduced, and, besides, they will often be driven back in whole heaps and series by those more powerful masses, as when the leaves of a book are turned hurriedly.

43. If the apperceived concepts—or at least some of them—are not on the statical threshold, then the apperceiving concepts suffer some violence from them; also the latter may be subject to arrest from another

side, in which case the inner perception is interrupted; through this, uncertainty and irresolution may be explained.

The apperceiving mass may be, in its turn apperceived by another mass; but for this to occur, there must be present several concept masses of distinctly different degrees of strength. Hence it is somewhat seldom that the inner perception rises to this second power [the apperception of apperception], and only in the case of philosophical ideas is this series considered as one which might be prolonged into infinity.

CHAPTER VI.

A GLANCE OVER THE CONNECTION BETWEEN BODY AND SOUL.

44. UP to the present chapter, concepts have been considered as present in the soul without any question concerning their origin or concerning foreign influences. This has been done for simplicity. Now, sense-perception in part and physiological influences in part, together with concepts already present, must be considered.

45. Even from experience it may be assumed that each act of perception of any considerable strength requires a short space of time for its creation; but experience and metaphysics at the same time teach that by delaying longer, the strength of the perception in no way increases in proportion to the time, but, *the*

stronger the perception already is, so much the less does it increase, and from this it follows, by an easy calculation, that there is a final limit to its strength which the attained concept very soon reaches, and above which even by an infinite delay the same perception will not be able to rise. This is the law of *diminishing susceptibility*, and the strength of the sense-impression is quite indifferent in regard to this limit. The weakest sense-perception may give the concept quite as much strength as the strongest, only it requires for this a somewhat longer time.

46. Every human concept really consists of infinitely small elementary apprehensions very unlike one another, which in the different moments of time during the continuance of the act of perception were created little by little. However, if during the continuance of the perception an arrest caused by old opposed concepts did not occur, these apprehensions would be all necessarily blended into a single, undivided total force. For this reason the total force will be perceptibly less than the sum of all the elementary apprehensions.

47. In early childhood a much larger supply of simple sense-concepts is generated than in all the following years. Indeed, the work of the after-years consists in making the greatest possible number of combinations from this supply. Although this susceptibility is never entirely extinguished, yet, if there were not a kind of renewal of it, the age of manhood would be more indifferent and more unfruitful in sense-impressions than it really is.

Though concepts on the statical threshold are quite without influence for that which goes on in con-

sciousness (16), they can not weaken the susceptibility to new perceptions similar to themselves. Hence this receptivity would be completely re-established if the earlier ratio of arrest were not quite changed by the new acts of perception, and a certain freedom to reproduce themselves directly given to the older concepts (26). When this happens, the receptivity decreases. The greater the number of old concepts of the same kind present in consciousness—this means usually the longer one has lived—so much greater is the number of concepts which upon a given occasion enter at the same time into consciousness; and thus with years the renewal of receptivity diminishes.

48. The above statements refer not only to concepts of exactly the same kind, but to all whose degree of opposition is a fraction. This can not be developed here, since in the foregoing nothing exact could be said of the difference between the degrees of opposition.

49. It is to be especially observed that the influence of the body upon psychical manifestations is shown in three ways—its repression (*Druck*), its excitation (*Resonanz*), and its co-operation in action. Upon this are the following preliminary remarks:

50. Physiological repression arises when the accompanying conditions, which should correspond to the changes in the soul, can not follow without hindrance; hence the hindrance will also be felt as such in the soul because the conditions of each affect both. This repression is often merely a retarding force, to suit which the mental movements must proceed more slowly, as is the case with slow minds that consume time and are stupefied by quick changes.

Often, however, repression is similar to an arresting force, and as such it can be mathematically calculated, as when it increases the number of opposed concepts by one or more. By it all active concepts may be driven to the statical threshold; and here we have the explanation of sleep. In this case it would be a deep and complete sleep.

51. Physiological excitation (*Resonanz*) arises when the accompanying bodily conditions change more quickly or become stronger than would be necessary to merely cause no hindrance to the mental movements. Then the soul, again in response to the body, will act more quickly and more vigorously. The soul must also share the resulting relaxations of the body, as in intoxication and passion.

52. The co-operation of the soul and body in external action can not originally proceed from the soul, for the will does not know in the least what influence it really exerts upon the nerves and muscles. But in the child exists an organic necessity for movement. At first the soul accompanies this and the active movements arising from it, with its feelings. The feelings, however, become connected with perceptions of the members moved. If, in the result, the concept arising from such a perception acts as a means of arousing desire (16), then the feeling connected with it arises, and to this latter as accompanying bodily condition belong all those phenomena in the nerves and muscles by which organic movement is actually determined or defined. Thus it happens that concepts come to appear as a source of mechanical forces in the outer world.

PART SECOND.

EMPIRICAL PSYCHOLOGY.

FIRST DIVISION: (I) PSYCHOLOGICAL PHENOMENA ACCORDING TO THE HYPOTHESIS OF MENTAL FACULTIES.

CHAPTER I.

A SURVEY OF THE ASSUMED MENTAL FACULTIES.

53. FROM the foregoing fundamental principles many known facts are to be explained, while many others still remain obscure. It is not necessary at present to define this difference more closely. The question how far the proposed explanations reach may silently accompany the following exposition until the facts are examined, for then the thread of investigation may be more conveniently taken up; but the commonly accepted mental faculties need now a critical elucidation which must advance gradually with the observation of the facts themselves.

Combined with the effort to bring together a manifold is naturally implied a separation of that which manifestly does not admit of union, since it is either excluded or else makes its appearance only under unusual circumstances. Inasmuch as the teachers of psychology have undertaken to show the human mind

in the form of a picture, they have at first omitted those features which constitute the distinguishing characteristics of the individual, as well as the changing conditions of human nature. We reserve these for the second division, and keep for the first only that which is considered an original and essential differentiation of the human mind into various functions.

54. Right here, however, on account of the peculiar indefiniteness of psychological facts, it is impossible to draw a dividing line. The man presented by the teachers of psychology is the social, the educated man, who stands on the summit of the whole past history of his race. In this man the various functions are found apparently in combination, and under the name of mental faculties are regarded as a universal inheritance of mankind. Facts are silent as to whether this variety be originally found together or whether it be a manifold. The savage and the infant give us much less opportunity to admire the compass of their minds than the nobler among the brutes. Here psychologists help themselves by the evasive assumption that all higher mental activity is potentially present, not in brutes, but in children and savages, and may be regarded as undeveloped talents or as psychic faculties; and the most insignificant resemblances between the demeanor of the savage or the child, and that of the educated man, are valued by them as perceptible traces of awakening intelligence, awakening reasoning, or awakening moral sense. But the observation must not escape us that in the following discussion a special and accurately limited condition of man will be described, according to the total impression which those men whom we call by the vague

expression "educated" have made upon us. Great uncertainty in regard to this total impression can not be avoided. There are no universal facts. Purely psychological facts lie in the region of transitory conditions of individuals, and are immeasurably far removed from the height of the general notion of man in general.

55. The comparison just mentioned between man and the lower animals occasions the first division into what is considered the original manifold of mental faculties. In so far as man rises perceptibly above the brute, higher faculties, and, in so far as he is similar to the brute, lower faculties are attributed to him. This classification crosses the one already mentioned, viz., presentation, feeling, and desire, each one of these being divided into an upper and a lower faculty.

As an aid in the survey of empirical psychology the two classifications are equally useful, and we shall use both.

56. Since in psychology one activity passes gradually into another, we shall not begin at the very equivocal line of demarkation between the two, but shall at first place the extremes opposite each other. For the lowest mental state, sensuousness; for the highest, reason will be assumed. The two are similar in that they both appear in the several members of the second division. We speak of a sensuous representation (*Vorstellen*), a sensuous feeling, and a sensuous desire; we speak also of a theoretic and a practical reason—i. e., of a conceptive reason and of a willing or regulative reason; but we are careful not to speak of a feeling reason, because we think of reason never as passive, but always as active, since it is to be regarded as

the highest faculty of man. The signification of the expression used here is, according to the common usages of speech, after a sort intelligible to every one. This is not the right place for nicer distinctions, as they themselves become the points in dispute.

57. If we go from the two extremes toward the middle, first of all, in the faculty of representation, in the region near sensuousness, we find imagination and memory; in the region of reason, we find understanding and power of judgment. Secondly, in the faculty of feeling, over against the sensuous feelings of pleasure and pain, we find the æsthetic and moral feelings, and the emotions. Thirdly, in the faculty of desire opposite the sensuous appetites and instincts, we find, on the one hand, intelligent and rational willing; on the other, the passions.

58. Before we lay out this rough sketch of the psychological field more in detail, we must observe the following: (*a.*) These classifications are mere empirical groupings without any indication of completeness, without any fixed, definite, and authorized division; hence, it will be no matter for wonder if, upon a closer investigation of the facts, subjects are discovered which either belong in more than one of the departments already made, or which can not be classified in any one of them whatever. Here are a few examples:

In Wolff's exposition, the faculty of feeling is not distinguished from the faculty of desire, nor, consequently, the emotions from the passions. We shall show hereafter that the emotions do not belong in the class of feelings, much less in the other classes; hence they do not belong in any one of the classes made, although feelings accompany the emotions, as well as

emotions the passions. Morals and æsthetics are, according to experience, felt, cognized, and desired, notwithstanding which we are not inclined, as perhaps in the case of sensuousness, to allow them to extend through all three principal faculties, as if moral feelings, cognitions, and volitions existed co-ordinate, equally independent of one another; but it is a disputed question whether morality has its origin in a command, in a cognition, or in a feeling. If we ask experience, the answer is undeniably this: morality is most often felt, more seldom rightly perceived, and most seldom willed. In this, however, there is nothing evident excepting insecurity and fluctuation on the part of empirical psychology, and on the part of every investigation which has no better foundation.

(b.) The classifications made can be used only in the preliminary examination, but in no way can they be used as an exact description of that which takes place in man, for they separate that which in reality is constantly united. Whether there can be a presentation in consciousness without feeling and desire, experience does not indicate; these movements of the emotional nature pass over incessantly one into another. It is evident that to every feeling, something felt, and to every desire something desired, belong, but whether in every case each must be a representation in consciousness, experience neither denies nor affirms, for a representation may be so vague as to be impossible of recognition. The affirmative answer has, however, the advantage, because in most cases it is manifestly the right one. The emotions (*Affecten*) do not belong in a class with the passions, yet we can by no means think of an entirely emotionless passion. Whoever describes

the history of only a single passionate outbreak must regard it, with all the emotions aroused by it, as a single transaction or occurrence. The continuous flow of this occurrence does not admit of its being presented as a mosaic painting, the individual bits of which might be collected from the several divisions of empirical psychology.

(c.) That the classified mental faculties exist not only side by side with one another, but in relation to one another, empirical psychology acknowledges, in the fact that it employs them throughout in the elaboration of one and the same material. This material is supposed to be received by the sensory [*Sinnlichkeit* = sensuous phase of the mind], and this gives rise to the question relating to the causal action of the outer world upon man. If this should be denied, then sensuousness must be regarded rather as a creative faculty. Memory, according to it, preserves this same material, but, unmodified by this preservation, fantasy makes it into new forms; and again unmodified by these new forms, understanding constructs notions from it; also the faculty of desire transforms it into an object of desire or aversion; and again fantasies, ideas, desires, etc., are to be preserved by the memory and upon occasion replaced with fresh material, and again subjected to the elaborating faculties, or, in case this appears inconceivable, is it perhaps only a part of the material which memory holds fast in its storehouse, and to fantasy will be surrendered another part, still another to the understanding, still another to the faculty of desire, etc.? Concerning this question we ask in vain of experience. So much the more necessary is it that we perceive

and acknowledge the indispensable, metaphysical pre-supposition of some kind of a manifold and complicated causal relation of the different faculties to one another, as well as to the alleged material which they are to elaborate in common.

59. By the admission of the causal relation just mentioned, psychology has hitherto fixed the order of presenting its doctrines. Sensuous presentations are first treated according to the statement, "*Nihil est in intellectu, quod non prius fuerit in sensu,*" and for the others an order is given which makes them proceed gradually from the former. The gradual development of individual man and of peoples, likewise the difference between the brute and man, furnish a guide here.

Experience shows that we meet with the lower sensuous phase much more frequently than with any other phases of the mental life, in reality, however, the latter never without the former; indeed, this is so much the case that we have great trouble in giving even a tolerably definite meaning to the expression "pure reason." Nevertheless, there are two important psychological facts which we can not understand otherwise than as incompatible with the causal relation between sense and reason, viz., pure self-consciousness and moral volition. What we, in the current of time, observe always as shifting accidents, that must we distinguish from our true Ego; we know the latter appears to us, independent even of the inner sense, by a so-called pure apperception. In its general acceptation, apperception signifies the knowing of that which takes place in our own minds; and a volition shows itself more clearly as genuinely moral when it scorns consideration of advantages and disadvantages as they lie before one

in experience, in which case the mind rises above sensuous feelings and directly opposes them. How is this elevation possible? The answer, through free-will, is one quite commensurable to the inner perception which is generally conceded in such cases. Hence a so-called transcendental freedom, independent of all causality, will be assumed, an assumption parallel with that of pure apperception. Now, if we attribute both to reason, as to that which in man stands the farthest removed from sensuousness, then in this signification reason is not so much something higher than sensuousness, but rather something quite different from it; and sensuousness can no longer be considered a basis, nor even as a condition of all the rest.

Upon this supposition, psychology in the arrangement of its material ought not to present a progress from sensuousness to reason, but ought to present two series of observations originally parallel, of which reason and sensuousness constitute the beginning points; the meeting-place of the two, however, in its manifold modifications, would be the highest region, and, as it were, the goal. Empirical psychology can oppose nothing to this demand. In my Introduction to Philosophy (103 and 107), however, it is already shown that the idea of the Ego and of transcendental freedom are contradictory. Hence, also, the idea just advanced, of a faculty of reason, is not consistent with truth. The common idea of sensuousness, however, especially when considered as the source of evil, is not more correct. The greatest evil is quite as little purely sensuous as sensuousness is pure evil.

NOTE.—When in common life we hear it said that one man has more understanding, another more memory, a third more

imagination, a fourth a sounder judgment, and yet, upon the whole, no greater nor less degree of mental health can be attributed to the one than to the other, then the conjecture arises that all this distinction of the so-called mental faculties has more to do with the products of mental activity than with the internal nature of the latter, whether this nature be sound or diseased.

Of the mental diseases, the four principal kinds or species empirically known—idiocy, dementia, madness, hallucination—will be more closely defined hereafter. It may be useful, however, to construct here the notion of mental soundness from the opposites of these terms, namely, susceptibility to reaction, concentration, repose, and mutual adjustment of all concepts through one another, since a lack in any one of these four requisites indicates an approach to mental disease much more directly than a defect in imagination, memory, or understanding, etc. The requisites mentioned, however, refer plainly enough to the previously mentioned theory of concepts as forces whose readiness to move upon the least change in their strength or combination is quite as perceptible as their tendency to remain at rest in equilibrium. By this theory, the collection of concepts of the same kind and of those already in combination, quite as much as every kind of possible reciprocal influence, are completely secured by the laws of reproduction, provided that no foreign influence on the part of the body disturbs the mental state. Nevertheless, the relation of the body to the mind can not be more closely estimated without mentioning some principles of the philosophy of nature, which, at this point, would be premature. To begin with, the first of the above-mentioned classifications (55) must be, if not freed from its indefiniteness, at least recognized in its many significations.

CHAPTER II.

THE BOUNDARY-LINE BETWEEN THE LOWER AND
HIGHER FACULTIES.

60. IN the representative faculties, the line of demarkation between the lower and higher runs between the imagination and the understanding; in the faculty of feeling, between sensuous pleasure and æsthetic feeling; in the faculty of desire, between the passions and deliberate choice. On account of the uncertainty in the definition of these faculties the line can not be drawn with precision; psychologists, too, admit that it can not be sharply defined; at least, so says Wolff, in his *Empirical Psychology* (233). This is so much the more evident because an *analogon rationis* is attributed even to the brutes, while no one concedes to them imagination similar to that possessed by human beings. The brutes would have, according to this, a share in the higher faculty of representation, and, on the contrary, would lack in something that is to be attributed to the lower faculty. The view held in regard to the faculty of feeling seems to be somewhat more satisfactory, as no one expects æsthetic judgment from brutes. Also in uncivilized men the æsthetic faculty seems to be wanting, and appears to be a higher degree of culture rather than a faculty peculiar to human nature. Finally, in regard to the passions we shall find some, and very wicked ones they are, which with the noblest have their origin in the highest regions of human thought, so that it is impossible to reckon them among the lower faculties, or

among those attributed to brutes. The subject must then be treated in some other way.

61. To attribute a lower faculty to the brutes in comparison with man, means to regard the mental power of the former either as defective, arrested, or suppressed.

Granted, first, that it is defective in itself in comparison with the more complete, wider-reaching, power of man; for this there are very significant reasons in the lack of hands and speech. Because of this, the opportunity of the brute to get concepts from objects is very much more limited than that of man, and while the understanding and intelligence of man are most closely related to speech, the brute at the most can attain to the understanding of only a few signs. The child, however, in the lowest grades of its education is in the same state at first; its knowledge of the use of its hands is quite as limited as of the use of speech.

Granted, secondly, that this mental power is arrested—as it originally might have been greater—then it is also arrested in the brutes, and, indeed, in a two-fold manner; for first, with them, some disturbing element enters into their circle of concepts which does not oppress man so much. In the case of brutes with mechanical instincts, it is quite clear that this disturbing element is an organic excitation which they obey; in the case of others, premature puberty comes into consideration. Besides this, however, on account of the comparative smallness of the brain of the brute, the physical organism probably may not yield to mental excitations as in the case of man.

Granted, thirdly, that this mental power or faculty be considered suppressed, this may be a faculty sub-

jected to service, or one entirely subdued; in that case this designation is not generally appropriate to brutes, but rather to the lower faculty of man so far as he controls himself. But, again, the control is so very dependent upon the degree of education already obtained, that it fluctuates, according to the kind, between cunning and morality, according to the degree to which the uncultured or sick man is proportionately incapable of exercising judgment. Finally, if exceptions are of any value, among trained animals there are so many cases of self-control acquired by practice that a distinction in the mental faculty which naturally would hold good in all cases can not be shown; we must rather fall back upon distinctions which are based upon favoring or hindering the growth of faculties or upon the training acquired. Consequently, we are neither necessitated nor authorized to regard the human mind as an aggregate of two specifically different faculties, fitted as it were into each other. But it appears that the mental excitability, according to the difference in the combinations and obstructions of concepts, is expressed in an infinite variety of forms. All these observations are independent of metaphysics. The question, however, whether if once metaphysics be called in, these observations would be refuted or established, is not to be discussed here.

To the man who rises to a higher degree of education we shall attribute empirically, not merely a simple, but a versatile capacity to apportion his attention, as it were, to many different acts—now intentionally to direct his thoughts, now to change the tone of his feelings, and again to prescribe for himself at one time

intermission or, at another, regular effort. It is known that among brutes little or no trace of this appears. In regard to the human faculty, attention has already been drawn to this point in the first part of this work (40-43). In this sense we shall recognize a higher and a lower faculty.

62. Between the lower and higher faculties of representation, Wolff places attention (however, only the voluntary, while the involuntary is perhaps even more important). According to him, the higher faculty begins with the distinguishing of notions whose characteristics the attention analyzes. This definition is, indeed, more limited in its compass than is indicated by ordinary language in the words, *understanding* and *intelligent*, yet it coincides in part with this distinction in a remarkable manner. Inasmuch as attention makes a notion distinct it brings forward in succession with equal emphasis the partial concepts existing in it. It levels or evens, as it were, the notion whose characteristics were heretofore projected unevenly and accidentally. Thus it is according to the nature of the thing thought, all of whose properties are independent of the differences which individual thinking brings into it, that more attention is exercised upon this than upon that characteristic. Also, it accords with the explanation (given elsewhere) of the understanding, which accounts for the meaning that the ordinary custom of speech associates with that word, viz., understanding is the faculty by which our thoughts are united according to the nature of the object thought. Sufficient examples of disproportionate individual thinking are to be found in common life. Such is the fragmentary knowledge of the routinist compared

with the symmetrically elaborated knowledge of the true scholar. The latter is without doubt a work of progressive attention.

63. In regard to the boundaries between the lower and the higher faculties, Kant was guided by the fundamental thought: "The union of a manifold can never occur through the senses. . . . All combination is a spontaneous [or self-active] act of the power of representation, which, in order to be distinguished from sensuousness, must be called understanding" (*Verstand*) (see *Krit. d. R. V.*, § 15). This very plausible assertion is, from its nature, speculative. (It occasions the higher Skepsis, which is described in my Introduction to Philosophy, 22-29 ; also, 98-103.)

In strongly emphasizing this thought Kant has rendered a great service to speculative philosophy, but he has only begun the most important investigations growing out of the above; in no wise has he completed them, and, while they necessarily must always hold their place as the foundation of general metaphysics, everything like this Kantian assertion must disappear completely from the dogmas of psychology, for the end of investigation is exactly the opposite of that which its beginning seems to indicate. The combination of a manifold (of concepts) does not take place by any process that could be called an act—at least, a spontaneous act; it is the immediate result of unity in the soul. Further, the combination of the manifold depends upon the manner in which the sense-impressions meet, and this is determined by external conditions, as already intimated in my Introduction to Philosophy. Finally, Kant's assertion can not in any way be supported by empirical psychology.

When thinking intensely we feel ourselves active, and then are sometimes conscious of intentionally grouping notions according to their characteristics, but, where we originally unite the manifold of a given intuition (*Anschauung*) into the notion of an object, we find ourselves obliged to take the object as it presents itself; we are limited to this, and know nothing of acts of spontaneity.

While activity is neither an attribute of the understanding nor the source of combinations, the understanding has, on the contrary, its seat in a certain kind of combination; indeed, the whole higher faculty encroaches upon sensuousness, memory, and imagination (which are usually reckoned among the lower faculties), so that in educated men it is manifested in such elaborate combinations as are not to be expected in savages and brutes. Here, first of all, belongs the extension of the concepts of space and time, which extend far beyond the sphere of sensuous impressions, even into infinity. By this we especially recognize the fact that power to look resolutely into the past and to anticipate a somewhat remote future is wanting in the brute and the savage.

Furthermore, there is a great difference between the mere meeting together of the characteristics of an object and the distinguishing of these characteristics from the substance to which they are attributed; likewise between the mere apprehension of a limited series of occurrences and the deduction of the same from causes and forces. The second power, but not the first, belongs to the higher faculties.

This remark, although occasioned by Kant's theory, belongs to the following :

64. Little as the logical polish of ideas can serve for the measure of the intelligence (we have but to think of the understanding of women, artists, statesmen, merchants) it constitutes, nevertheless, a part of the difference which we seek. The savage and the brute also have, without doubt, total impressions of objects that resemble one another, complex concepts of trees, houses, men, etc., but in this case the contrast between the abstract and the concrete is wanting. The general notion has not been separated from its examples. This separation belongs to the higher faculty, as does also the difference between object and space, event and time, as likewise the difference between our Ego and our changing conditions; while one brute certainly distinguishes itself from the other with which it contends for food.

65. *Æsthetic* and moral apprehensions in savages are rare and limited; in brutes they seem to be entirely wanting. Choice is much less deliberate, and upon the whole appears not to be so persistent as in the case of cultured men. The brute has here, side by side with the lack of higher powers, a positive peculiarity, viz., a visibly greater dependence upon instinct, which is in part periodical, and stands in the closest connection with the physical organism.

66. All that has been cited gives no conclusive series of fixed differences either between humanity and animality, or between the higher and lower faculties. But we have no reason to demand causes and fixed differences where we meet transient ones sufficient to explain satisfactorily how one could have come to ask about the difference which is everywhere assumed to be one and the same. However, if it

should be thought that the brute is brought too near to man, the following remarks are of weight on the opposite side :

We know very little of brutes. We distinguish their different classes much too little. In the training of brutes, from which we learn to recognize a perceptible versatility of talent, we find in most cases, at the foundation, that quite as false a notion exists as in the case of the defective education of the child. The brute can receive no training save that which is according to the inner laws of its nature; and, even when we intend to use the brute only as a brute, the greatest part of the applied force, even if it was necessary for the attainment of the aim, is without doubt coarse abuse. Whoever has observed young brutes, must have remarked how often they strive to use their fore-feet as hands—a vain effort to overcome the limitations of their organization. To man, however, instead of insolence, a little more gratitude for the advantage of education, in the possession of which he especially rejoices, is to be recommended. Besides, while manifold differences in the mental activity of different brutes remain a secret to us, the differences between men are much more plainly to be perceived. To the question whether concepts can completely manifest themselves as forces in man, or whether here, perhaps, something of the limitation observed in the brutes remains, the following may furnish a general answer: The hands of man have been obliged to furnish themselves with innumerable tools. Language has needed the printing-press. Geniuses reveal the great extent to which free mental activity is lacking in an ordinary man, and idiots show how closely in the human form the bands

which the physical places upon the mental life may be tied. Finally, self-control, a work of higher education, suffers in every failure in training and education. Hence it is sufficiently clear that the human activity, as hitherto known, is not to be regarded as a complete, conclusive exposition of what concepts acting as forces, may be able to accomplish, and the conjecture quickly rises that in the other heavenly bodies, under other conditions of gravitation, atmosphere, illumination, etc., may be found physical organizations furnishing much better opportunity for the development of the mental activity.

CHAPTER III.

FACULTY OF REPRESENTATION.

67. THE following conspectus shows those aspects which are considered to belong to the faculty of representation :

- A. Production $\left\{ \begin{array}{l} (1) \text{ of experience: } \left\{ \begin{array}{l} (aa) \text{ According to matter.} \\ (bb) \text{ According to form.} \end{array} \right. \\ (2) \text{ of ideas which transcend experience.} \end{array} \right.$
- B. Reproduction :

According to this outline, we shall examine the faculty of representation, and in doing so shall consider the usual classification of the assumed mental faculties.

A. The Outer Sense.

68. The production of the material of experience is principally the work of the outer senses, of touch, taste, smell, hearing, and seeing.

What is called the material and form of experience is discussed in my Introduction to Philosophy (25-29).

The five senses mentioned are enumerated according to the organs of sense. There is a larger number of the different classes of sensuous impressions. Moreover, the organs themselves contain sensitive surfaces, hence innumerable sensitive places; with the remarkable difference that in the case of some senses only a total sensation arises, while in the case of others every single spot of the sensitive surface furnishes a separate presentation.

69. The feeling of pressure, and that of warmth and cold, has its organ extended over the whole surface of the body. Pressure is perceived in very many different ways, according as it is uniform or not uniform in the different parts of the sensitive surface and in the successive moments of time during the continuance of the sensation. Thus we distinguish sharp, smooth, rough, elastic, etc. Warmth and cold are perhaps perceived more in the inner parts of the nerves, pressure more in the outer

The sense of touch is originally feeling, but this feeling has a special application by which it helps to determine the form of the experience. At the beginning we may remark that in touching, several fingers, several parts of the tongue—in a word, several portions of the sensitive surface—are brought into play.

70. Taste furnishes very many distinguishable sen-

sations, which, however, coming simultaneously, interfere with one another. The tongue is, at the same time, an excellent organ of feeling of every kind. It receives different kinds of nerves.

71. Odors, like tones, are obtrusive; but they do not, like the latter, admit of being distinguished into separate elements. The apparatus of smell is less under our control than the organs of the other senses; even when in our power, it suffers much in its functions. Odors may cause death, and may propagate infectious diseases. They are mostly pleasant or unpleasant, seldom indifferent, but none can be long perceived; each quickly blunts or overtakes the organ. In comparison with the savage, and with many brutes, the susceptibility of the civilized man in regard to this sense seems to be blunted.

72. Of all the senses, hearing is the richest in the variety of sensations which it furnishes. Musical tones are distinguishable, even coming simultaneously. The distinguishing of vowels is independent of them, and in addition to these two classes comes the perception of consonants which appear to belong to the class of complex noises. The unrhythmical and yet intelligible speech of man is a noteworthy phenomenon; those who from birth are quite unmusical yet hear very well what is said to them.

Probably every musical tone has its own peculiar place in the organ. Unless this is so, it is not easy to comprehend how simultaneous tones remain separate, and why they do not produce a third mixed tone which would destroy the æsthetic apprehension of the interval.

73. Sight distinguishes colors, and, independently of these, the degrees of light and shade. Every spot

of the retina of the eye sees individually, and furnishes a separate sensation. In many eyes which otherwise possess keen sight, the color-sense is in part wanting, while in others it fails entirely. The greatest mobility, the capacity to adapt itself to near and remote objects, to strong and faint light, finally to cover itself voluntarily with the eyelid, are peculiarities of this organ.

It will be shown hereafter that mobility aids most especially the apprehension of the space forms. This apprehension is by no means so original as it appears; it is learned and passes through very different steps of development.

NOTE.—Every sense has its degree of acuteness and delicacy, its extent and duration. Up to this time, everything that has been said refers only to sensations, not to perceptions, which latter presuppose the concept of an object opposed to other objects and to the subject, and hence bring into play at the same time most of the so-called mental faculties (by no means merely those of sense). He who forgets himself and becomes absorbed in sensuous contemplation (*Anschauung*), as it is called, is only in a condition for the reception of mere sensations.

B. The Inner Sense.

74. No perceptible organ of the body indicates an inner sense; but, from analogy with the outer senses, it has been assumed, in order that we may attribute to it the apprehension of our own conditions in their actual succession. The inner sense, so far as it is held to be a special component of our mental constitution (the explanation is to be found in *The Principles* above discussed, see sections 40–43), is consequently entirely an invention of psychologists, and indeed a somewhat defective invention; for they know neither how to reckon definitely the classes of concepts which

it furnishes, nor how to point out any semblance of a law, according to which the extreme irregularity of its working might be explained. The outer senses perform their functions, if they can, and, in case they fail to do so, we know the reason for the failure; but the inner sense, at times watching sharply everything that occurs in the innermost recesses of the heart (also, indeed, inventing much there) is at other times so dull and so idle that, although we may be conscious of having had a thought, we feel ourselves incapable of finding it again. The inner sense is not able long to endure the strain of intentional effort; that which we wish to see accurately in ourselves becomes obscured during the observation. Besides, wonderful as is that material of experience which the inner sense furnishes us, just as wonderful does the mental activity ascribed to it sometimes appear. Not seldom the self-apprehension seizes upon the most violent emotions and tames them. Sometimes in the midst of the most intense labor in the outer world, a man restrains himself notwithstanding the pressure, in order to complete his work rightly. The actor, who represents a cunning deceiver, is conscious, first, of his own person; second, of the character of his *rôle*; third, of the art of simulation and of the appearance assumed, which are attributed to this character as the means of the deception. Indeed, the inner sense rises in a scale of higher and higher powers *ad infinitum*; e. g., we may observe our self-observation and again an observation of that, and so on forever.

NOTE.—In the controversy between the Cartesians, on the one hand, and Locke and Leibnitz on the other, the disputed question is, whether there are concepts without consciousness.

The simplest and shortest answer is, that if all representation had to be again represented, then the inner sense would be obliged to rise in an unbroken series to an infinitely higher power. In the Leibnitz theory, however, the assertion of unconscious concepts is made to depend on the metaphysical idea of substance.

C. Forms of Series

75. Space and time have been explained by a very incorrect theory, inasmuch as they are regarded as existing forms of sensuousness which are individual, single, and independent of one another. Space is the only completely elaborated series-form. It is produced especially in connection with sensations of sight and feeling; it is, however, not by any means limited to these sensations, but quite a similar kind of production, either complete or within certain limits, occurs from many other causes, either clearly or vaguely thought; sometimes with characteristic accompanying conditions which cause other series connected with it to be distinguished from space. Such a series is time. Another is number. Another is degree or intensive magnitude.

Less distinct, but nevertheless indispensable, is the series produced by the putting together of sensations of the same kind according to the possibility of transition one to another. From this we have the tone series (to be distinguished from the scale, which depends upon æsthetic conditions). Similar to it would be the color surface between the three primary colors, yellow, red, and blue, if we knew certainly whether all the colors were connected with the grades of difference between light and dark (perhaps we should say black and white), and could be traced back to those three;

or whether the color realm does not rather require a third dimension.

NOTE.—In the difference between light and dark, as well as in the tone-series in the contrast between high and low tones, a concept of succession in the ascent is to be perceived, which discloses the fact that the process of arching and pointing (see § 26) moves more slowly in the lower and darker, and, on the contrary, more quickly in the higher (tones) and lighter (shades). In music, the bass voice generally moves more slowly than the treble.

Still less distinct, but quite as indispensable, is the series in every logical arrangement where the varieties are opposed to one another, and are, at the same time, united in the species. Not merely the expressions here are space symbols. In the thing itself there is something through which such expressions as the circumference or sphere of a notion is called up, although these words, so far as they are borrowed from space which is the elaborated series, are only metaphysical.

Quite as necessary in metaphysics is the theory of intelligible space, which, with perfect clearness, is construed according to all three dimensions, merely for the convenience of metaphysical thought without mingling anything sensuous.

76. The concept of a series is shown most comprehensively in the notions of integral positive numbers. But these notions, gradually created and extended (savages and children have not a little trouble with them), do not suffice in themselves to express all varieties of progression increasing or decreasing, the production of the series in numbers becomes constantly more artificial and complicated: e. g., between whole numbers continuous transitions are made by means of fractions; also a backward prolongation of the series may be made by means of minus numbers. Again, the ideas of surd roots, logarithms, and exponential quantities, are developed; finally, we have the countless functions resulting from integration, at the foun-

dation of which lies a differential—i. e., the idea of a certain ratio of increase or decrease.

Briefly, for psychologists, arithmetic furnishes the remarkable example of a concept of a series constantly becoming more abstracted, which may be traversed in both directions and by infinitely minute steps.

77. By analogy with this undeniable fact, we may find it at least probable that the geometrical concept of space, in its infinite magnitude and divisibility, is by no means innate in man, but is a product of a series formed similarly to that mentioned above. This is so much the more true, inasmuch as the infinite plasticity of space notions is shown continually in that which geometry, in its continued onward progress, makes out of it. The principles for the explanation of this production of space will be found in the third division of this book. Here we may especially call attention to the notion of a middle between two opposed sides. This is characteristic of every series. A number lies between numbers, a place in space between other places, a point of time between two points of time, a degree between a higher and lower degree, a tone between other tones, etc.

Further, we may remark the psychological fact that we habitually carry with us a certain standard of measurement, a unit of distance, be it full or empty, in space, in time, and in the tone-series, and also something of the same kind in dealing with intensive magnitudes, as is noticeable in the case of measuring by the eye, and of beating time.

D. Logical Forms.

78. Philosophers have a bad habit of leaning heavily on logic in difficult cases—not for the purpose of following its prescriptions with special care—which would be very laudable—but to imitate or copy its procedure, which they have observed in its scientific development. Warning examples of this are Kant's categories, put together according to a very defective table of logical judgments, and also his categorical imperative which contains nothing but a reminiscence of the logical relation of the general to the particular. Therefore, in psychology, one has found it unnecessary to say anything upon notions, judgments, and syllogisms, except that to each logical operation there is doubtless a corresponding faculty in the soul; and because logic in order to proceed from the simple to the complex, treats first of notions, then of judgments, and finally of syllogisms, the psychologist has unhesitatingly treated the so-called faculties of these things, viz., understanding, judgment, and reason, in the same order. But several circumstances make the fact doubtful whether notions, in the strict logical sense, really occur in human thinking, and it is a question whether they are not rather logical ideals which our actual thinking strives more and more to approach. In the third division of this book this question will be answered affirmatively; besides this, it will be shown that it is through judgments that notions more and more nearly approach the ideal; hence, in a certain sense, judgments precede notions. It will finally be made clear that from this influence of judgments very important results, especially for metaphysical notions, will be found.

79. For information regarding those ideas which we call notions we may inquire of dictionaries and grammars. For each word, the dictionaries show us a thought which fluctuates between a mass of different characteristics that are sometimes hardly reconcilable. The grammars reveal the fact that, wherever strictly logical demands do not require it, instead of general notions (as man, tree), we generally think but one individual, and indicate it by the indefinite article (a man, a tree). Hence, it is no wonder that most men, when they are asked what they mean by this or that word, have not a good verbal definition ready. Hence, too, men do not present each general notion according to its content (as ought to be the case in logic) and then proceed to regard the application to the extent as something accidental to the notion itself. On the contrary, they indicate certain total impressions of many similar objects by means of words, and the signification of these words, which is in no case firmly fixed, must, in the use, suggest the connection every time to such a degree that one may recall prominently certain characteristics of an otherwise indefinite thought.

From this we can see how we should burden psychology with a problem based upon misconception if we should propose to explain the source of truly general notions in the human soul.

General notions can not be shown to actually exist, except in the sciences, where one can plainly see how they are formed—viz., by positive and negative judgments which affirm all the kinds of characteristics that belong to the definition we seek, and deny all others.

80. Now, on the contrary, it is a fact not to be

doubted that human thought very often (although not always) assumes the form of judgments. The combination of a subject and predicate lies at the foundation of nearly all forms of speech in the languages of civilized peoples. It must not be forgotten, however, that the logical demand that the subject and predicate shall be clearly defined notions, is not complied with in actual usage.

81. The fact just mentioned may appear a wonderful psychological phenomenon. Upon the supposition that a being that forms ideas should recognize a real or only an apparent world, or even only think a world as possible, it does not by any means follow that this thinking and recognition must assume exactly the form of judgments, but one may be tempted to consider such a remarkable condition as a peculiar trait in the constitution of human nature.

The representation, considered as a copy of the objects presented, should resemble the objects themselves, and should correspond to them in the most exact manner; but no one will consider the connection of subjects and (for the most part negative) predicates to be a combination that takes place in the objects. The painter who sketches for us the person about whom we inquire, gives us a much more exact knowledge than he who, with words, should enumerate all the predicates which are perceived by a single glance at the sketch. Moreover the whole scaffolding of varieties and species which, according to the principles laid down in the introduction to logic, we may be able to build into notions, is entirely foreign to reality, and is never used except in our cognitions expressed in the form of judgments.

NOTE.—To the mind of many a philosopher (e. g., Spinoza) has occurred the ideal of an intuiting cognition, for which, indeed, if it were a reality, a so-called intellectual intuition, non-sensuous in its origin, and beholding the truth directly, would be demanded. If contradictory notions were taken for the objects actually intuited, and as such recommended to us, the result would be such as has already been in part experienced by the present age. If we do not desist from following artificially the *cum ratione insanire*, psychology may, however, still be enriched with quite as sad as remarkable facts. On the contrary, if we understood how to place false systems at a distance and to observe them from the right standpoint, we should learn something from them.

82. The main question which we have to put to speculative psychology is, Whence comes the passive attitude of the subject—viz., that thought to which a determination must be given by the predicate? Inasmuch as, in thinking, the subject and predicate come together in the relation of substantive and adjective, why are they not so placed at once? Why does it appear that a real psychic faculty called judgment must first connect them?

In view of facts, the following observations are to be made :

(a.) It is a begging of the question to assert that all human thought is an unconscious judgment. In reality, judgment is manifested only in speech, but a man has many thoughts which he can not express in language.

(b.) A man's inclination to communicate with others has a great influence upon the development of his thought in expressed judgments. Perhaps the converse of this is also true; the reserved man may be one whose concepts do not readily assume the form of

judgments. Among children may be observed very striking differences in regard to talkativeness and reserve, even when the latter does not arise from shyness or indolence.

(c.) Expression is often a necessity, and gives relief. The judging in this case is connected with instinct and feeling.

(d.) The decisions which express preference and rejection are special kinds of judgment in which subject and predicate are very sharply separated. The tendency to these is so great that one believes readily in omens—i. e., he is inclined to consider every event as threatening or favorable. From the repeated attempts of philosophers to refer good and bad to affirmation and negation, it may be supposed that between the judgment on one side, and desire and repulsion on the other, no fundamental, natural, but rather a psychological, relation must exist.

(e.) Another principal kind of judgment in which the separation and the fusion of the two component elements are very observable, presents itself in the union of the new with that which is already known. Either that which is known is the subject here, and the new constitutes the predicate, with changes which we observe in the things—e. g., the tree blooms; or the new is the subject, and is subsumed under a known predicate—e. g., in all answers to the question, What is that?

The latter remarks are, it is true, only an enumeration of instances, but, taken psychologically, the general is often only to be explained by the particular, because very frequently particular concepts are made general by transferring them to others. As the notions

of irrational quantities arise while the concept of a division into equal factors is transferred to those numbers which do not consist of several equal factors, so also universal custom, in order to bring all speech into the form of judgments, may have had a very special beginning, and we are in no way justified in supposing that all thoughts which now appear in the form of a combination of subject and predicate contain in themselves the reason for such an arrangement.

NOTE.—Judgments, such as $A = A$, or, The stone is not sweet, are school formulas and school examples. But if the judgment made be original, then the standpoint of the one making the judgment is disclosed. Children judge and question where the adult no longer separates his already united substantive and adjective, and where he is restrained partly by knowing the limits of human knowledge, partly by custom, and partly by his inclination to regard things only from a business point of view.

The process of arching and pointing (see sec. 26) is easily to be recognized where an answer is given to the question, "What is that?" "It is nothing but snow," said a child to whom a snow-cake was offered. Here the cake was the subject, the apprehension of which occasioned the arching, What kind of a cake? until the pointing left only the snow remaining. The final propositions, This cake is not edible; it will melt, are of a similar kind. The predicates here come from within—i. e., they are contained in the nature of the subject. The case would be reversed when a person, who hitherto has been accustomed to see dogs run free, for the first time sees and expresses the judgment that the dog carries goods to the market. He would have passed by a wagon drawn by horses without expressing any judgment. The arching causes tension, the pointing satisfies: hence there is a pleasure in judgment; hence we have hasty judgments and chatter, which injure observation and thinking. The observer would have remarked more if he had not gone away satisfied with one kind of pointing. In the case of the thinker, the arching would have been more complete and its

elevation greater. Besides this, the pleasure in judging injures the constructive power. Critical minds are seldom creative.

The observer goes successively from one arching to another; he forms series of judgments. Mere sense-perception does not separate the predicates; it is less acute: the arching is defective, and therefore the pointing is also defective. Often inaccurate repetition follows upon this. Language, with its many significations attached to words, exerts an influence here, provided no effort be made to secure a constant correction.

83. Logic considers syllogisms to be progressive unfoldings of the steps of a thought. Upon this point only two observations are suggested:

(a.) Very rarely in ordinary speech is such a progressive development presented in the form of a complete syllogism. The syllogism has nearly always something tedious in it, unless it be abridged, as in the enthymeme. This is in no way a fault in the syllogism (as it is often considered), but merely a reminder that logic and psychology are different things. The concept series, for the most part, deal with the minor premises, while they only touch the major premises in passing—so to speak.

(b.) Very rarely have the creations of thought originally (in the act of invention) the accuracy of the syllogism. In most cases they are attempts to unite into one a pair of notions which relate to the same middle term, even before the necessary quantities of the propositions and the precise form of their identity with the middle term are proved. Correct conclusion and correct measuring are closely related. The middle term as the standard of measurement must be firmly held.

84. Hence, if the power to infer be attributed to the faculty of reason, then, again, an inadmissible

limitation of the faculties of the soul becomes visible. To form syllogisms and to test and confirm them are two quite different things, which, in reality, are for the most part widely separated. The first may be ascribed to imagination, the second to reason.

85. Finally, mention must be made here of logical approval, which is very different from æsthetic approval. The former, unlike the latter, does not consist in a preference, the opposite of which is rejection, but in a recognition by which, upon the whole, one is pleased with the object as it is; but with the recognition is combined a peculiar kind of feeling in which the pressure of evidence and the gratification of a claim are mingled, and the question as to whether it is more pleasant or unpleasant can only be determined by the circumstances. The principal thing here is to observe how the alleged faculties of recognition and feelings are related, or, as the psychologists prefer to say, flow into one another, with which they are contented and do not trouble themselves to inquire further concerning the causal relation existing in this influx.

E. Transcendental Notions.

86. It is not easy to determine what belongs to experience and what transcends it. Kant reckons the notions of substance and force as belonging to that which enters into experience as a condition of the latter, and, according to him, there is a *substantia phaenomenon*. In this we must differ from him on the grounds which have in part been presented in my Introduction to Philosophy, and which will be further developed in the General Metaphysics—that is to say,

the notion of substance is not the same as the notion of thing, but has arisen from it. Thing is conceived as a complex of characteristics without calling up the question of the real unity of those characteristics which are therein blindly presupposed. Substance is the bearer of all the characteristics, and something different from them, a notion which first arises when we perceive that we must distinguish the characteristics from their unity. This notion is contradictory; it must be transformed into the notion of an essence which, by virtue of disturbances and self-adjustments, presents to us the phenomenon of a complex of characteristics which in truth do not by any means belong to it. The notion of force depends upon that of substance, and is developed in almost the same way with it, viz., out of the notion of a changing thing; also, it is to be subjected to a similar metaphysical correction. Both notions arise at the outermost limit of experience as contradictions which extend into the department of metaphysics—i. e., which oblige us to go beyond experience, and to establish beliefs or convictions in us whose objects can not be furnished by any experience.

87. Furnished with the notions of substance and force (however obscure and incorrect the thought of them may otherwise be), the human mind penetrates into all parts of space and time, both into the infinitesimally small terms of the same series, and also into the maxima in order to find the highest and most sublime. Thus arise questions concerning the infinity of the world, concerning the constituent elements of matter (either masses or atoms), concerning the world of spirits and of God.

NOTE.—It is highly inopportune at this point to raise psychological questions upon subjects of this kind, as has been the tendency of late, under the mistaken notion that in this way we may gain a certain, scientific basis. Invariably the notions of the mental faculties by which these subjects are to be recognized are formed according to the opinions upon the subjects themselves; and, first, one must have sufficient metaphysics to enable one to correct these opinions before one can even ask what capacity for the knowledge which lies beyond the senses may dwell in man. If one could invent a false logic for the pleasure of false speculation, then one might also venture the same thing with psychology; but experience will not yield.

88. Here belong the purified geometric notions of bodies as uniform productions of pure surfaces, lines, and points. Moreover, they transcend experience, or rather experience transcends them, because each sensuous object adds something to these notions by which it specializes them. The question concerning the mental faculties which furnish the fundamental notions of geometry is so much the less necessary because at the first glance one can see that these notions (by the presupposed production of the space series) are obtained from experience, provided it be possible to analyze that which the senses present in a confused condition; an operation which is not dissimilar to the formation of scientific general notions.

F. Reproduction.

89. In the case of reproduction which refers entirely to the temporal life of man, viz., to the continuance of concepts once created, we again find on the part of psychologists a carelessness in regard to the real question. Our concepts recede from consciousness and return again. For which shall we first seek reason

—the receding or the returning? The question must first be directed toward the former, although, in fact, it is usual to discuss only the latter.

90. Reproduction offers two special points for discussion—its vividness and its accuracy. The former is ascribed to imagination, the latter to memory. Thus two mental faculties are invented for one and the same thing which is regarded from two different sides; for this there is, however, an excuse which is easily recognizable in that which directly follows.

91. A high degree of accuracy and vividness of reproduction, at the same time and in equal proportions, is very seldom found. Accuracy depends mainly upon the fact that a concept reappears in the same connection with others as that in which it first appeared—i. e., with the same characteristics of a thing, the same circumstances of a transaction, the same combination of time and place relations, etc. This requirement will very seldom be fulfilled in cases where the vividness of the reproduction allows the return almost simultaneously into consciousness of many concepts which are connected with one another, and which cross one another in various ways. Thus it is found that men of much imagination possess but little accuracy of memory, although in this respect there are exceptions.

NOTE.—Several psychologists include, under memory, reproduction with recollection. The latter is to express the judgment that one has had the same concept before. From this sometimes a special faculty of memory is very unnecessarily assumed. But the judgment mentioned, by which subject and predicate are really separated, can be very seldom proved to take place, and the whole theory is in nowise accordant with the usages of language. We say of a man who easily learns a speech by rote, and without taking it out of its connection repeats it accurately,

he has a good memory, even if he does not remember during the repetition that it is the same discourse which is written on this or that paper, and which he memorized at this or that hour.

92. Psychological writings are full of remarks, which it is not necessary to record here, upon the association of concepts or ideas; in other words, upon the manner in which the latter call one another up, not only according to perceived combinations of time and space, but also according to resemblances, and even apparently according to contrast. Rather we may mention here the varied complicated course which reproduction often takes—e. g., he who finds coals and ashes in a forest thinks immediately of burning wood which (farther backward) may have lain dry in the forest, then (forward) of men who may have encamped there and who may have set fire to it. But how came the men there? (This question goes backward.) What has become of them? (Forward.) What fire might have originated had a storm arisen? (Sidewise into the region of possibility, at the same time looking back upon the storm and forward to the injury.) Or a man finds old coins in the ground. How do they come there? To what time do they belong? Wherefore were they buried? To whom does the treasure belong? Every seed recalls the plant from which it started, and points forward to that which may arise from it, while at the same time it suggests the use which may perhaps be made of it without planting it. It is a useful exercise to observe in many such examples as the above the changing directions and ramifications of a course of thought. Besides, it is well known that in the case of association, according to resemblances, one thing is put in the place of the

other many times, out of which arise many new complications, or inventions, for which an inventive faculty has been found.

NOTE.—In all inventions creation in its broadest sense is the most essential element. Quite as much imagination belongs to original scientific thinking as to poetic creation, and it is very doubtful whether Newton or Shakespeare possessed the more imagination.

93. Memory and imagination agree in this, that in every man their special strength is limited to certain classes of subjects. For him who wishes geometrical imagination, exercise in the so-called art of poetry would be quite useless; and he who retains, without any trouble, the technical terms of a science which interests him, has often a bad memory for village gossip. Here we find that reproduction, as well in regard to its vividness as to its faithfulness, is most closely related to other mental activity, and that the assumption of peculiar psychical faculties which take care of reproduction as a means only of grouping manifestations satisfactorily is in the highest degree awkward.

94. Memory and imagination differ from one another in that the former appears to bring up only represented and, as it were, dead pictures, while the latter appears to be employed in the process of active representing. The transition of concepts from one condition into another is very perceptible in the re-reading of something which one has one's self written; also, in verifying what one has one's self thought out.

CHAPTER IV.

THE FACULTY OF FEELING (GEFÜHLVERMÖGEN).*

95. IF we begin to assume psychic faculties, there arises the necessity for assuming one or more additional besides the representing faculty, for the reason that, by an account of that which we represent, or of how the representation arises in us, we are by no means able to indicate all that goes on in our minds. Especially is it to be seen that in us are manifested manifold phases of preference and rejection, on account of which the faculties of desire and aversion have been set up side by side with the faculty of representation.

96. Now, in the broad and dim space near representation, the boundary between feeling and desire has recently been drawn. But if psychologists are asked concerning the origin of this boundary, they say that desire relates to objects, and feeling to conditions or states; yet their explanations move in a circle, or at least do not touch the question as to whether perhaps feeling and desire are one kind of occurrence, which we in our representation observe from different sides, and hence call by two different names.

NOTE.—Maass, in his work upon feelings, explains feeling through desire ("A feeling is pleasant, in so far as it is desired for its own sake"); but, in his work upon the passions, he says that it is a well-known law of Nature to desire that which is conceived as good, and to detest that which is represented as bad. From this the question arises, What is good and what is bad? To

* The reader will observe that the word feeling is restricted here to the meaning implied by the German word *Gefühl*, and is not used indiscriminately to indicate feeling, emotion, and desire.

this we receive the answer, Sensuousness represents as good that by which it is pleasantly affected, etc., and here we find ourselves in a circle. Hoffbauer, in his *Outlines of Empirical Psychology*, begins the chapter upon faculties of feeling and desire thus: "We are conscious of many conditions in our minds which we try to reproduce; these we call pleasant. Certain concepts create in us the effort to make their object real; this we call desire." Here is one and the same basis, viz., effort, underlying feelings and desires, and, if the distinction be in the objects and conditions, then the question is, whether perhaps the feelings, consequently the conditions, which were expected from the objects, may not be what is really desired. This important point appears to be treated no better by other authors. They ought to have noticed the excellent remark by Locke, in his work on the *Human Understanding*. It does not exhaust the subject, but proceeds in the right way, and shows that many desires (if not all) are independent of feelings, although they may have the latter as results. That which Locke calls dissatisfaction is no feeling, but the first movement of desire.

97. Now, as the facts which we call feelings can only with the greatest difficulty be separated from those called desires and aversions, to enumerate the kinds of feelings is a very uncertain undertaking. Three kinds are prominent: sensuous comfort and pain; feeling of the beautiful and the ugly (with which the sublime and trivial may be included); and the emotions which as yet we are accustomed to discuss under the subject of the feelings. But with this the subject is not exhausted. In the first place, we must observe that the feelings are doubled through sympathy with that which others feel. In the next place, we may remark that each kind of outer and inner activity, according as it succeeds or fails (i. e., according as the desire underlying the activity is satisfied or not), carries with it comfort or discomfort. Furthermore,

that feelings mingle in various ways (a disputed point like the following). Finally, there are conditions of feeling which, if not indifferent, are, nevertheless, so constituted that pleasure and discomfort are not characteristic of them, and their strength can not be measured by those sensations

98. In order to have at least a fixed standpoint, we shall divide feelings into those which depend upon the nature of what is felt, and into others which depend upon accidental mental conditions; here a third class may be mentioned as existing between them, viz., a class which depends upon a certain mental condition, so that this, in connection with the nature of the object felt, gives rise to a corresponding feeling. Next we must speak of the intermediate condition between the pleasant and the unpleasant; and, lastly, the emotions will come in their turn.

A. Feelings which arise from the Nature of that which is felt.

99. That there are such feelings is an evident fact. Every bodily pain, as such, is unpleasant, without regard to the question how much ado we make about it, or how patiently we bear it. Moreover, unpleasant feelings of this kind are specifically different. Burning, cutting, electric shock, aching teeth, each of these excites its own peculiar pain, which may be distinguished from every other, although a mere imaginary pain that in itself would be neither pleasant nor unpleasant, does not admit of being separated; rather the sensation and its opposite are one and the same. Sweet viands, soft tones, a mild temperature, furnish examples of pleasant sensations of this kind, the pleasure of which

is understood, without regard to the question as to its value, or whether by it one is inclined to seek their continuance or to give one's self up to these sensations.

100. These feelings are analogous to all æsthetic feeling, from which they differ only in this, that in the latter case the object presented is made the subject of a predicate, which expresses approbation or blame; hence the æsthetic feeling is brought into the form of a judgment and is scientifically treated, which from a practical standpoint is infinitely superior.

NOTE.—When, in the beautiful, size predominates, a sense of the sublime arises. This is a genuine species of beauty, because relations of magnitude themselves belong to the elements of beauty. But we seek in vain for the definition of the ridiculous, which has its origin in the possibility of laughing, and which can not be considered without reference to a human body and its organic vital sensations. The most purely comic sensations would to the pure intellect amount to mere contrast. Laughing belongs to the emotions; like the latter, it shakes the body, and again, in reversed order through the latter, it shakes the mind. Like the emotions, it is a mental condition of short duration, for which, according to the whim of the moment, we find ourselves in readiness or not. Besides, the ridiculous is an example of that which is strongly felt, without either pleasure or the reverse being a characteristic of it. As we know, there is a joyous and a bitter laugh, and between the two a certain indifference toward the ridiculous, as in the case of the comedian, whose serious business it is to arouse laughter in others.

B. Feelings that depend upon the Mental Conditions.

101. In connection with the above first class of feelings, it may be correctly stated that feeling is the source and (at least in part) the ground of explanation of the corresponding desire and aversion. In the second class, just to be considered, desire, on the contrary,

must be regarded as something original, and the feeling is not to be considered an effect, but the associate and follower of the desire.

We may mention here the numerous desires which are either independent of the pleasure or pain of their object, or which have no relation to the latter. All the things which are wished for to-day and despised to-morrow, everything whose value decreases and augments according to individual caprice and partiality, furnish us striking examples here. The desire for these things is, as is known, accompanied by much unpleasant feeling, and, in the case of gratification, by a brief pleasure. Such pleasant and unpleasant feelings can be called neither sensuous nor rational. It is connected with the arousing of our activity, just as the object of our deed may be so constituted as to affect our activity. Whether a child wishes to untie a knot in a string, or a mathematician wishes to solve a problem in numbers and geometrical figures, the feeling of exertion and of ineffective effort remains always of the same kind. The restless activity of man (contrasted with the natural effort of the brute) is generally of this kind. Here belong also the feelings which appear to entirely lack an object, as in the case of anxiety, or in that of comfortable repose.

C. Intermediate and Mixed Feelings.

102. All feelings of contrast, and of amazement, which latter are in a way related to the former, may be regarded as intermediate feelings—i. e., such as can neither be described nor estimated by the pleasure or the pain which they bring with them. Amazement may be pleasant quite as well as unpleasant. In

all beautiful art, contrasts are indispensable, and yet they are very seldom connected with essentially æsthetic relations; rather they serve, first of all, to hold the manifold asunder, and thereby to promote the intelligibility of the æsthetic relations.

103. That there may be mixed feelings follows in any case from the difference between the two classes before mentioned. An example of this is curiosity, which desires to see something foreign to itself, and which is satisfied by a sensation which has become in part really unpleasant to itself. Besides, no one who studies experimentally can be willing to deny mixed feelings, inasmuch as cases daily occur where one and the same event affects our feelings in different respects, and very often in opposite ways.

NOTE 1.—False speculations have succeeded in obscuring these simple facts. People fancy that they have discovered a twofold delusion: first, an exchange of the feeling itself for its manifold causes; second, a misapprehension of the transition from one feeling into another. These remarks may not make the facts doubtful, but will still less establish the opposite assertion. It has already been shown (see sections 34–38) that the feeling and the willing of man are founded in the concept masses, and not by any means directly in the soul. Hence the variety and conflict of feeling, as well as of willing, are given in experience quite as intelligibly as certainly.

NOTE 2.—Only too often poets are moved to mingle feelings in their works of art. Thus they may reach the piquant, but not the beautiful. Great masterpieces may frequently be misunderstood. Shakespeare introduces the comic into his tragedies, but, if by this he for the moment relaxes a tense condition in order so much the more certainly to increase it again, he is careful never to allow the ridiculous to become attached to his principal characters. In his narration of the journey of Odysseus, Homer is romantic; but that is a narration of extraordi-

nary sufferings, and portrays the character of Odysseus himself, from whom no one would expect a purely serious and faithful account.

D. The Emotions (Affecten).

104. After the emotions (transitory variations from the condition of equanimity) have been separated from the passions (rooted desires), a prevailing opinion has arisen that the emotions are nothing but stronger feelings. But there are very strong enduring feelings which have grown into the deepest recesses in the foundation of human character (e. g., adherence to one's own people and to the fatherland), with which the most complete equanimity exists so long as nothing of an opposite nature which may disturb them appears. The moment of danger to one's own, or to the fatherland, may arouse emotion, but this emotion is widely different from feeling itself. In the same way, a man may possess a strong and lasting feeling of honor without being in a condition of emotion from it. So far from emotions being feelings, they rather make feeling tame or dull. The moralist and the artist have great cause to guard against insipidity, which arises when one from pure emotion finally no longer knows at what he weeps or laughs.

105. Kant's classification of the emotions into melting (i. e., paralyzing to activity) and stirring (*rüstige* = arousing to activity) throws light upon the subject. Variation from equanimity may occur from two causes: either there is too much or too little present in consciousness. To the first class belong mental shock, sadness, fear; to the second, joy and anger.

106. The emotions are not merely a psychological but also a physiological subject, for they act upon the

body with remarkable, often dangerous power, and by this means, in reverse order, make the mind dependent upon the body, partly from the continuance of the bodily condition (which does not cease so quickly as would the mental state by itself), partly from the tendency of the body to yield to emotion. Thus courage and timidity are very often dependent upon health and sickness.

It is a remarkable circumstance that different bodily conditions belong to different emotions. For example, shame drives the blood to the cheeks, fear makes one pale, anger and despair increase the strength of the muscles, etc.

From this we see that it would be wrong to enumerate and distinguish the possible emotions according to a merely psychological principle.

NOTE.—Without presenting here the theory of the union between soul and body, according to the laws of natural philosophy, we may make further use of the two preceding observations:

1. Every gradual excitation of one system by another works by reflex action in such a manner that from the part of the system excited the disturbance is extended into the exciting part. Under the excitement of emotion, not only the body is disturbed, but the mind suffers a prolonged uneasiness, and indeed the different systems of the bodily organism must be disturbed in the same way. The excitation goes from the soul to the brain, from the brain to the spinal marrow, from the spinal marrow to the ganglia, from there to the circulatory system, from there to the individual organs, and thence to the nutritive system—and then the influence returns in reversed order [from the nutritive system to the soul], and not suddenly but successively, just as the excitation proceeded, which latter may be regarded as an accelerating force (according to the technique of mechanics).

2. The partial effect upon definite organs, of which the emotions give proof, must also occur where we do not observe it. In the reproduction of visual concepts arises an excitation of the optic nerve, in that of auditory concepts an excitation of the auditory nerve, etc. ; but, in the concept of a movement, the nerves of motion are excited, so that the special act of holding back is necessary, if the movement is not to follow.

If we combine these two explanations just given, then the most varied tendencies are explicable without any occasion for the current theory which confounds life and soul, thus giving rise to the error of materialism, so called, which in regard to matter is still more preposterous than in regard to soul.

CHAPTER V.

THE FACULTY OF DESIRE.

107. IN regard to the word desire, we must, at the very first, correct a wrong use of speech which obtains generally in treatises on psychology. The faculty of desire, together with those of representation and feeling, should furnish an exhaustive classification of the mental activities. It must, therefore, include wishes, instincts, and every species of longing, inasmuch as they belong neither to feelings nor to representations. In works upon psychology is to be found the assertion that that which is desired must be represented as attainable ; the belief in the impossibility of attainment kills the desire. This statement is true in regard to willing, which is a desire combined with the supposition that it can be fulfilled. Hence there is a great difference between a strong will and a strong

desire. Napoleon willed when emperor, and desired when at St. Helena. The expression desire must not be so limited as to exclude those wishes which remain, though they may be vain or so-called pious wishes, and which, for the very reason that they do remain, constantly incite men to new efforts, because through them the thought of a possibility is ever anew suggested in spite of all reasons which appear to prove the impossibility of attainment. It is very important to give to the concept of the unattainability of the wished-for object strength enough so that a peaceful renunciation may take the place of the desire. A man dreams of a desirable future for himself, even when he knows it will never come.

108. According to the classification of feelings made above, we must now distinguish among desires (the word taken in its widest sense) those which have for object something pleasant as such (aversions having something unpleasant as such) from others whose direction is determined by no feeling, but merely by the present mental condition.

NOTE.—Usually the latter kind of desires is misunderstood. We think that the object desired must necessarily be represented as a good thing. This is either a tautology—if good means the same as the thing desired—or it is an error which, from an empirical point of view, belongs to the numberless gratuitous assumptions of psychologists. In Alexander Baumgarten's *Metaphysics* (665) is to be found the statement: "*Quæ placentia prævidens exstitura nisu meo præsagio, nitor producere. Quæ displicentia prævidens impedienda nisu meo præsagio, eorum opposita appeto.*" This is given as the law of the faculty of desire (*lex facultatis appetitivæ*). But regarded as a general law this theory of that otherwise valuable work is defective in every point. *Placere*, so far as it means anticipation of something

pleasant or beautiful, is not necessary. *Prævidere* has likewise crept in. It is true that whoever represents to himself a desire, will find his concept develop time conditions. But the lowest animals also desire, and yet we can not assume that they separate the present from the future. *Exstitura nisu meo* presupposes the concept of the Ego, or at least a feeling of self, which has a much later origin than the simple desires of brutes and of young children.

109. The most important distinction, however, is that between the lower and higher faculties of desire. For the two separate into hostile classes, while feelings exist side by side, or mingle together; and, in regard to concepts, most people, even cultured men and scholars, remain at the sensuous standpoint without being seriously troubled by the metaphysical protest against sense-knowledge.

A. The Lower Faculties of Desire.

110. Here we are first met by impulses and instincts. Of the latter, man has only a fragment; we find them existing in the brutes in more perfect form and in greater variety, where it is clearly shown that by means of them the organic structure constitutes the essential and governing principle. The constructive art-impulses of brutes are special examples of instincts.

But the most important and the most general of the impulses is that for movement and change, the restless activity which is especially displayed in children and young animals, in which we find much vitality with little mind. Such examples afford practice in distinguishing between life and soul. Since this activity varies according to age, and, besides, is different in individuals from birth, we may believe that it is a

result of the organism, hence rather a physiological than a psychological subject.

111. Now, as psychologists have made their discoveries by the analogy which the outer sense bears to the inner, side by side with the organic impulses they place several others, such as self-love, the impulse of imitation and of exaggeration, the social instincts, etc. Yes, they even assume a general instinct to seek happiness, although no one can specify definitely the object of this latter instinct, as it differs in different individuals.

It is clear that nothing but psychological abstraction, under the name of instinct, has given the very indefinite idea of happiness a foundation. But in regard to self-love and the social instincts, the case is no better. Desire here precedes all thought of I, thou, he. Experience shows plainly enough that egoistic prudence as well as resolution to sacrifice something for others is only formed gradually, according as the knowledge of the collisions that take place between selfish and altruistic interests is more deeply impressed.

The insidious introduction of real forces, or at least of special talents and native germs, is particularly frequent in the theory of faculties of desire, because man shows himself active in his desire, and is, above all, inclined to assume as many forces as classes of real or apparent activities.

112. The inclinations, or those lasting mental conditions which are favorable to the rise of certain kinds of desires, show themselves more than the so-called instincts to be different in different people. They are for the most part results of the habit which appears to extend from the faculty of representation into the

faculty of desire. For there are, first, the thoughts which follow the accustomed direction, and which, if no hindrance intervenes before there is opportunity for perceptible feeling and desire, pass directly into action; but if something is placed in the way, then the desire, accompanied by a feeling of effort and fatiguing activity, increases.

113. The most striking, and, next to madness, the saddest spectacle in psychology is furnished by the passions. In his *Anthropology*, Kant has delineated them excellently well. They are not inclinations or mental conditions, but are desires, and every desire, without exception, the noblest as well as the worst, may become a passion. It becomes such in so far as it attains dominion to such an extent that moral deliberation is out of the question. A tendency to attach undue importance to trifles is the peculiar sign of the passions. Hence, they can only be defined and described in contrast with practical reason. A perfect classification of the passions is quite impossible, for the reason that every desire, strengthened by circumstances and habit, may give a perverted direction to internal deliberation. Every classification of passions is at the same time a classification of desires in general. In history, the passions play a conspicuous part. One should beware of attributing this part to Providence; by doing so one would resemble Mephistopheles too much, and finally, like him, would fall out of his part.

B. The Higher Faculties of Desire.

114. Deliberation precedes judgment and action, when a man, before he joins a predicate to a subject,

and before he changes the present places of things, compares other possible ways of thought and action. In deliberation lie deferring and delay, as well as concentration and pondering. Deliberation is supposed to obviate revocation and repentance. It accomplishes this in so far as every one among the possible kinds of representation, each desire that might come into collision with another, is allowed to enter fully into consciousness, and as strongly as possible to work against the others, or to co-operate with them. If in this process something is forgotten—if during a period of deliberation something is hindered in manifesting its full value, then there is danger that another mental state will follow, and the decision of the former mental state be found objectionable. Hence deliberation is an inner experiment, the result of which must be accepted with entire submission; from this, reason in thought and action has its names [i. e., the “theoretical reason” and the “practical reason”].

115. Hence, reason is originally neither commanding nor law-giving; above all, it is not the source of willing. It is quite as little a source of knowledge. Nevertheless, it is regarded as such; indeed, it is thought to be the highest judge and authority, which is a very natural result, inasmuch as (with the customary habit of making gratuitous assumptions) the danger of having to repent—if one does not act according to the results of reflection—leads one, in connection with the threat, to think of a command, and, in connection with the command, of one who gives the command.

116. Moral (*Praktische*) deliberation becomes more complicated by reason of the connection between means

and ends. It has not indeed to weigh a manifold immediate desire against another (in order to choose among several ends), but also to go through the series of possible results which are connected with the ends, and which make their attainability probable. In the latter respect, deliberation is ascribed to practical understanding, which is the faculty of adjusting itself to the nature of the thing thought, independent of imagination and passion. When this kind of deliberation is completely perfected it creates plans. The choice among ends, however, is restricted by practical reason.

117. Circumspection is the mental condition of a man who reflects. If it becomes a habit, deliberation is extended continuously in every direction; finally, an effort is made to include every possible desire in one act of deliberation, while more and more one's wishes are constantly limited and subordinated. The question is concerning the ultimate aim of all human action and impulse—viz., the highest good. In this, deliberation makes use of general notions. Maxims (very different from plans) and principles are originated, and, these being collected, a science of morals is developed.

In practical philosophy it is shown that after setting aside all changeable desires depending upon the momentary inclination, only the non-arbitrary preference and rejection can hold the highest rank, and such is in fact assigned in the æsthetic judgments upon the will.

For this reason the work of deliberation (or if one prefers, of practical [moral] reason) is to bring forward those judgments, and the ideas arising from them—viz., of inner freedom, of perfection, of benevolence, of right, and of equity. These ideas must be disentangled

from their complication with all other thinking and willing wherein they lie, at first hidden, and they must be placed at the summit of all wisdom, while desires and wishes are collectively made subordinate to them.

C. Freedom of the Will.

118. When a decision, the result of a completed act of deliberation, is on the point of presenting itself, it often happens that a desire arises and opposes this decision. In that case a man does not know what he wishes—he regards himself as standing between two forces which draw him toward opposite sides. In this act of self-consideration he places reason and desire opposite each other, as if they were foreign counselors, and regards himself as a third, who listens to the two and then decides. He believes himself to be free to decide as he will.

He finds himself sufficiently rational to comprehend what reason may say to him, and sufficiently susceptible to allow the enticements of desire to influence him. If this were not so, his freedom would have no value; he would only be able to incline blindly in this or that direction, but he could not choose. Now, however, the reason to which he gives heed, and the desire which excites and entices him, are not really outside of him, but within him, and he himself is not a third, on a level with those two, but his own mental life lies in each and works in each. Hence, when he finally chooses, this choice is nothing but a co-operation of those two factors, reason and desire, between which he thought he stood free.

When a man finds that reason and desire in their co-operation have decided over him, he seems to him-

self not to be free, but rather subjected to foreign arts and influences.

Manifestly, this is again an illusion, and from exactly the same source as the first. Just because reason and desire are nothing outside of him, and he nothing outside of them, the decision which arises from them is not foreign, but his own. He has chosen only with self-activity, yet not with a force different from his reason and from his desire, and which could give a result different from those two.

NOTE 1.—Here is the principle ground for psychological illusions in regard to freedom. We can not here consider the deeper lying metaphysical and moral misapprehensions mingled with the illusions mentioned. It may be very briefly stated that the difficulties that are found in responsibility are the easiest of all to remove. An act is held to be responsible so far as it can be regarded as a product of a will; it is more or less responsible the more or less it discloses weak or strong will. So far everything is clearly and generally well understood. Now, however, all this is thrown away if the will itself may in turn be determined by something else, for this is no better than if the standard by which everything else is to be measured should itself be subjected to a measurement. Thus the fear arises that if the will has had other causes from which it unavoidably proceeded, these causes should bear the blame, since not only the will but the actions arising from it should be imputed to them. Hence we prefer to ascribe to the will a self-determination. From this arises an infinite series (compare Introduction to Philosophy, § 107). But that fear is quite groundless: responsibility stops with the actor, just as soon as the action is referred to the will; for this is at once subjected to a "practical [or moral] judgment" (Kant's "categorical imperative"), which remains in perfect self-identity and independence whatever may be mentioned as the causes and occasion of the will. However, if it be found that the will had an earlier will as its source, the responsibility begins again anew. The depraved man after he has become en-

tirely bad, will be held to be completely responsible for his crimes, but these again may be laid as a burden upon his corruptor, and so on backward as long as somewhere a will may be pointed out as the originator of those crimes.

NOTE 2.—Transcendental freedom, which Kant wished to be assumed as a necessary article of faith for the sake of the categorical imperative (because he had failed in finding the right foundation for practical philosophy) is an entire stranger in psychology. Let him who does not perceive this, study Kant's two Critiques of Pure and Practical Reason, and learn from them to treat this subject with caution. Kant has taken great pains to create in himself a clear conviction upon this point; he has, however, produced the confusion that adheres to his categorical imperative, but which with his followers took on quite other forms.

119. Now, while the consciousness of freedom, so far as it is to stand between reason and desire, rests upon no better facts than have been given above, quite another result is reached if reason itself be considered the seat of freedom. Nothing is more evident than that the passionate man is a slave. His incapacity to consider motives of advantage or duty, his ruin through his own fault, are clearly evident. In contrast with him, the reasoning man who represses his desires as soon as they are opposed by considerations of good, may rightly be called free, and, the stronger he is in this power of repression, the freer he is. But, whether such a strength may be increased *ad infinitum*, can not be determined by existing cases, for these indicate only a limited power.

· CHAPTER VI.

THE CO-OPERATION AND DEVELOPMENT OF THE
MENTAL FACULTIES.

120. THE hypothetical assumption of faculties, in the foregoing discussion, has been shown to be so defective that the attempt to give an exhaustive survey of their mutual influence in all their combinations would necessarily appear useless. However, before we observe the human mind in its changing conditions more closely, a few remarks will be useful in facilitating the summing up of the preceding discussion.

121. Next to the outer senses, whose indispensability is at first glance evident (what would a man be, born blind, deaf, and without hands?), reproduction in its forms of memory and imagination is without doubt the chief seat of the mental life. The exercise of the senses, confined as it is to the present moment, gives very little, and we should be limited to mere animal existence if the past did not remain to us, as a treasure into which we are constantly dipping. At the time when the flow of unsought thoughts is weak, or quite stopped, we best realize the poverty of feelings, the crudity of desires, the inactivity or ineffective effort of the understanding and reason without the imagination.

The work of imagination ripens into permanent products in myths and traditions, which are elevated into objects of faith by the art-power of representation.

122. This is the place to mention habits and accomplishments. For these reproduction is especially necessary; we can secure them in permanent form by

no other means, and the same may also be said of the necessity of the exercise of the understanding, of reason, and of moral culture. For the facts that may be cited for this indicate that earlier formed ideas, judgments, feelings, volitions, quite as well as sensuous representations, are reproduced, and that they obtain a new influence by means of this reproduction; they show also that reproduction occurs the more quickly, surely, and accurately the oftener and more carefully the attention has been occupied with those notions. Moreover, facts show that habit has much less to do with memory and imagination than with the concepts that are reproduced. To the person who learns much by rote, memorizing will become gradually easier, though this facility is restricted to the circle of concepts to which he is accustomed. Let the person who has a great memory for music attempt to commit to memory a series of names or numbers, and he will soon see of how little benefit to him the previous exercise of the memory is to him in this field.

123. Cultivation takes place in two principal directions, which are determined first by the inner sense and secondly the outer action. Reflection is connected with both, which fact occasions the first remark that this reflection (the bending back of the course of thought to a definite point) sometimes intentionally revives and forms concepts (in work), and at others it is employed in the apperception of the object given in experience; therefore, that in the first case the activity proceeds from it, and is controlled by it; in the second case, on the contrary, the excitation lies in the object presented. But the two cases are never entirely separated. Moreover, the work of reflection creates a new object every

moment, inasmuch as the work advances and comes under observation, and just here reflection connects itself with it. Conversely, experience leads us to comparison and judgment, but with these comes further reflection which deals with the notions, or opinions, or caprices present, as the objects fixed upon by reflection, according to the peculiarity of each. Reflection upon an object which exists merely in thought is of a different character. Here the movement lies in the reflecting mass of concepts themselves. The continuous fixing of this object of pure thought, however, to which the observation is to confine its attention, still costs not a little effort.

The inner sense, which is usually placed on a par with the outer sense, on account of this similarity, is in this case quite out of its natural relation. It is rather the great principle which lies at the bottom of all regular activity, especially of artistic fancy and of practical reason. Without self-consciousness man could control neither himself in general nor his activity in particular.

External action which objectifies a man's thought and embodies it for him, but at the same time gives an opportunity for various distortions, always includes within its compass desires, observation, and judgment. In so far as it succeeds or fails, it changes desire either into express volition or into a mere wish, accompanied by pleasure or pain, by which the foundation is laid for the habitual disposition of the man. New conditions of life often furnish new incentives to action; thus, a man often appears to change all at once. This is most striking in a case where a common need occasions a new common action, and from the isolated

"I's" a new "we" is created. Yet it is perhaps more remarkable to observe how after a time a person apparently changed becomes again the same as formerly.

The deepest impressions are given to a man's character through his external deeds when they belong to his vocation or his daily occupation. Here we see in the clearest manner both the conflict and the co-operation that exist in the dominant masses of concepts that belong to the series which is actually passing through the mind. During labor these masses of concepts are in equipoise in consciousness, and every individual act depends on the flowing series for its place and time, and it must be undertaken at the point fixed by the stage of advancement of the work.

Very important determinations of character flow from the peculiarity of the employment pursued. The series of concepts that determine the life of the gardener, or of the farmer, move slowly with disturbances through natural causes which often necessitate his watching and waiting. The series of the musician, actor, etc., have, on the contrary, their distinct rhythm. Again, the concept series of the fencer, juggler, etc., move quite differently and require that without definite rhythm the right moment must be most accurately perceived. One of the most important directions for the practical educator and teacher is that he observe as accurately as possible how the concept series ought to proceed among his pupils, and how they can and actually do proceed. Important differences which demand attention are to be found here.

124. Whatever a man by inner thinking or external action may attempt, certain permanent feelings rise more and more out of the fluctuating mental con-

similar when they regard the curve as consisting of indefinitely short straight lines.

151. Furthermore the soul has no time relations. In thinking, however, wherein it is included with other essences, it must be conceived as in time and indeed as in eternity, although this eternity, and still more the temporal duration, must not be predicated of the soul. (Introd. to Phil., 115.)

152. The soul has no innate natural talents nor faculties whatever, either for the purpose of receiving or for the purpose of producing. It is, therefore, no *tabula rasa* in the sense that impressions foreign to itself may be made upon it; moreover, in the sense indicated by Leibnitz, it is not a substance which includes in itself original activity. It has originally neither concepts, nor feelings, nor desires. It knows nothing of itself, and nothing of other things; also in it lie no forms of perception and thought, no laws of willing and action, and not even a remote predisposition to any of these.

153. The simple nature (*Das einfache Was*) of the soul is totally unknown and will forever remain so. It is as little an object of speculative as of empirical psychology.

154. Between several dissimilar simple essences exists a relation which, with the help of a comparison from the physical world, may be described as pressure and resistance. For the reason that pressure is the retardation of movement, the relation mentioned consists in the capacity of the simple quality of each existence to be changed through the other, if each did not resist and maintain itself in its quality against the disturbance. Self-pervations of this kind are the

only events which really occur in nature, and this is the combination of event with being.

155. The self-preservations of the soul are (at least in part and so far as we know them) concepts and indeed simple concepts, for the act of self-preservation is as simple as is the essence which is preserved. Hence there exists an infinite manifold of other such acts of self-preservation, which differ as the disturbances differ. With this explanation the manifold of concepts and their infinitely varied complexes present no difficulty whatever.

This is not the place to discuss feelings and desires. They appear to be composed of something objective, added to a preference and rejection, which will be explained later. Nor can we at this point discuss self-consciousness, or anything whatever that may be considered as belonging to the inner sense.

156. The difference between soul and matter is not a difference in the nature of the simple essences, but it is a difference in the manner of our apprehending them. Matter, represented as a spatial reality with spatial forces, as we are accustomed to think it, belongs neither in the realm of essence (*Sein*) nor in that of actual events, but is merely an appearance. This matter is real, however, as an aggregate of simple essences, and in these essences something really occurs which results in the phenomenon of a space existence.

The explanation of matter depends entirely upon showing how to the inner states of the essences (self-preservations) certain space-conditions belong, as means necessary for the act of comprehension by the spectator, which space-conditions, just because they are noth-

ing real, must be adjusted to those inner conditions; and by this an appearance of attraction and repulsion arises. The equilibrium of the two latter (attraction and repulsion) determines for matter its degree of density, likewise its elasticity, its form of crystalization in free condensation, in a word its essential properties, which in this form are originally based upon the qualities of simple essences.

Matter never fills space as a geometric continuum (it can not be composed of simple parts), but with imperfect mutual penetration of its adjacent simple parts. (Concerning this contradiction compare the remark in section 150.)

Matter is impenetrable only for those substances which are not capable of changing the equilibrium of attraction and repulsion that exists in it. It is always penetrable for that agent which is capable of dissolving it.

NOTE.—Concerning the foregoing and what follows, reference must be made to the author's *Metaphysics*, in which is found his *Philosophy of Nature*.

CHAPTER II.

VITAL FORCES.

157. VITAL forces are nothing original (I have named them in the plural because they can neither originate nor act alone), and there is nothing similar to them in the nature of essences.

Only a system of self-pervations in one and the same essence is capable of creating them, and they are to be regarded as the inner development of simple essences. Generally, they originate in the elements of organic bodies whose arrangement is fitted for producing systems of self-preservation in the individual elements. This is shown in the assimilation of food.

158. Once acquired, there remains with each element its own vital force, even though the element be separated from the organic body to which it belonged. This is shown in the sustenance of the higher organism by the lower, and of the vegetable organism by decayed parts of other organic bodies.

NOTE.—To this belongs the explanation of all generation, without exception, including that of some lower organisms from apparently crude material—i. e., from such material as possesses no organic structure (structure is a space-predicate)—but from this deficiency of structure the lack of vital force can by no means be inferred. To assume, however, an original vital force in this is an unwarranted procedure. In our circle of experience there is no matter whatever of which it could with certainty be asserted that it is entirely inorganic. The whole atmosphere is full of elements which have already gained vital force in some organic body or other, and the number of such elements is constantly increasing in nature. Indeed, we do not know whether the same mutual exchange of vital force does not occur among the stars.

159. All human investigation must recognize the fundamental source of vital forces by referring them to that Providence according to whose designs they were originated. No metaphysics and no experience reaches further. Every theory as to the probable creation of lower organisms by a natural process from in-

organic matter, and the development of higher organisms from those of a lower order, can be refuted.

160. In the example of the soul, psychology shows us an excellent internal development of a simple essence. According to this type, one must explain the development of all other essences, even those that are not able to represent or conceive. To this may be added a former remark that, where several essences make up a material whole, the inner state determines an adequate external condition for it—i. e., a position in space. For this reason vital forces generally appear moving forces; just for this reason, however, their movements can not be comprehended through chemical or mechanical laws. With the latter, no inner development comes into consideration.

In the above the relation between psychology and physiology is indicated. Psychology is the first, the preceding; physiology, in case it is to be something more than a mere empirical science, the second; for it must learn from the former to understand the notion of inner development. We can not have a correct definition of life without the help of psychology.

NOTE.—On this difficulty of defining life consult among others Treviranus (*Biology*, vol. i, p. 16). The most comprehensive empirical characteristic of vitality is assimilation, which, for this reason, is first mentioned in the foregoing. If an organism should be found without this peculiarity, we might doubt whether it could be considered to be living, even if it were granted that it might possess a soul (a case which may very well be admitted in the general notion).

161. From the above it is self-evident that the vital forces may be very different in kind as well as in degree. For a system of self-pervations might be

different in different essences; in similar essences the self-pervations vary according to the difference in the disturbances; finally, there may be a greater or smaller number of self-pervations belonging to them.

From this may be explained the difference in those parts which are nourished by the same kind of food. The elements of which the heart and the nerves consist certainly do not differ in their chemical constituents so much as in their internal structure.

The causal relation between the different parts of the same living body, likewise that between this body and the outer world, offers upon the whole no difficulty whatever. All causality, and especially all cohesion of matter, depends upon the dissimilarity of the elements. Hence, for example, the action of the nerves upon the muscles can excite no special wonder, much less can it justify hypotheses of electric currents, polarizations, etc., which are empty vagaries that owe their existence to the latest hobbies of the physicist. There might be something true in them, and yet, even then, the most important questions remain unanswered, and in the end one riddle take the place of the other.

CHAPTER III

THE CONNECTION BETWEEN SOUL AND BODY.

162. THE connection between mind and matter in the brutes, and especially in man, has in it much that is surprising, which must be referred to the wisdom of

Providence; but this is not where we are accustomed first of all to seek it, because we consider matter real so far as it occupies space, and because we regard the human mind as an original thinking, feeling, and willing existence, so that between the two (matter and mind) there is no middle term. We may seek beyond matter, as a spatial manifestation, for the simple essences possessing capacity for internal development from which this manifestation arises. We may regard the mind as the soul endowed with power of representation. We may remember that to the concepts, as self-preservations of the soul, other self-preservations in other essences (in the nervous system) must correspond. Thus we perceive that the chain of self-preservations belonging together may indeed extend still further; that it may run through a whole system of essences which present themselves as one body; and we shall no longer consider it enigmatic if from the foot to the brain, and even into the soul, a succession of internal states having nothing to do with the lapse of time nor with any movement in space is extended forward and backward. Time and space may appear, however, as accompanying phenomena.

163. First of all, the question concerning the location of the soul, which has been wrongly refused a hearing, presents itself here. It is acknowledged upon physiological grounds that we can not with any degree of probability indicate a place but only a region for it (in the point of junction between the brain and the spinal cord). Nor is a fixed position necessary, but the soul may move in a certain region without the least indication of it being given in its concepts; nor can the slightest trace of its movements be found by

making an anatomical investigation. The change of its seat, however, may be regarded as a very fruitful hypothesis for the explanation of its anomalous conditions.

NOTE 1.—This statement has aroused much astonishment, yet physiologists may remember that their sphere of observation lies in the regions of space, and they might leave it to the metaphysician to see that nothing more be allowed to space than belongs to it. If they wish, however, to share his cares with him they must earnestly study metaphysics, and then one will be able to talk further with them.

NOTE 2.—We should have no reason for assuming that in all brutes and in man the seat of the soul is in the same place. Probably in the brutes, especially in the lower orders, it is in the spinal cord. Furthermore, we can not assume that each brute has only one soul. In worms whose severed parts continue to live the opposite assumption is probable. In the human nervous system may be found many elements whose inner development widely surpasses the soul of an animal of the lower order. (Besides, we must not forget that indications of life are not indications of soul. In organic parts that have been separated from their organism, life may continue for some time without soul.)

If we wished, however, to attribute to man several souls in one body, we should beware of thinking of mental activities as divided among them, rather the latter must be regarded as being entire in each soul. Secondly, the most exact harmony among these souls would have to be assumed so that they might serve for identical examples of the same kind. This is, however, in the highest degree improbable, and hence the whole thought is to be rejected. If, in the contest between reason and passion, it sometimes seems to a man that he has several souls, this is a psychical phenomenon which can not be considered in connection with the paradoxical thoughts just mentioned, but which will be explained later.

164. The whole nervous system in the human body serves a single soul, and by means of this system the

soul is implanted in this body, more a burden than a help to it, for the body lives as a plant for itself, provided nourishment and a suitable place be given it, as sometimes has to be done for idiots. Stories of some who were idiots from birth give rise to the thought that they may be merely vegetating bodies without souls.

165. With the close causal connection of all parts in the whole system which we call man, the varied dependence of the mind upon the body can appear in no way strange. So much more wonderful is it that, upon the whole, the nervous system appears to be made almost entirely to obey the mind. We shall perceive this more and more when we see how little the physiological conditions are necessary to explain the states and activities of the mind. Yet only in the healthy man is the nervous system a good servant. In illness it shows itself disobedient and obstinate, and in many mental disorders, especially in dementia, the relation between the nerves and the soul is entirely reversed. This is an indication that we are not to regard the healthy condition merely as a natural phenomenon which could not be otherwise, but in it we have to revere a beneficent arrangement of Providence.

166. It would be hardly necessary to mention the intercourse with the outer world which is afforded to the human soul and at the same time limited through its body, were we not obliged to remark in regard to the theory, now very wide-spread, concerning a general organic connection of the whole universe, that we can not bring the latter into relation with the theories advanced here if we do not wish to mix up entirely heterogeneous concepts,

NOTE.—There are no tenable grounds *a priori* for a universal causal relation, and experience ends with the feeble glimmer of light which remote suns throw on one another.

SECTION SECOND.—EXPLANATIONS OF PHENOMENA.

CHAPTER I.

CONCEPTS OF SPACE AND TIME.

167. It is as yet too early to explain everything in psychology. Meanwhile much has explained itself in the foregoing, and the comparison of facts with the principles established will gradually lead us to further explanations.

How the world, and we ourselves, as phenomena, come to appear to ourselves, is the first point upon which we need a psychological revelation, in order especially to learn to comprehend the origin of metaphysical problems. After that the question must be concerning our position in the world from a practical [moral] standpoint, especially that we may compare that which we can be with that which we ought to be.

168. Why we apprehend things in the world in the relations of space and time, must be answered by an investigation into the nature of series of concepts (29). The following serves as an introduction:

In section 28, instead of the definite particular remainders r, r', r'' , of a single concept P , the infinite multitude of all its possible remainders is given, and these are considered to be blended with innumerable concepts $\Pi \Pi' \Pi''$, etc. Thus for the concept P will

arise a continuous succession of reproductions, each of which has, however, its own law which depends upon its remainder r , according to the formula in section 25.

Moreover, in section 29, instead of the series a, b, c, d , etc., there is posited a continuous succession, of which each member like P , with all its possible remainders, is blended with other members, but each in a peculiar manner.

Besides, let this succession of blended concepts be considered to be extended indefinitely on both sides, and finally let it be remarked that, if it be not made impossible by accompanying conditions, each member of the succession may be such that in it several such successions may cross one another (as in c , section 30).

Moreover, when any one member in this whole system of concepts moves even in the slightest degree, the movement is transferred to the next member, and so on, with the inviolable law that if of three remainders r, r', r'' , of one and the same concept, r' lies between r and r'' , then also the concept Π' (between Π and Π'') blended with r' will be reproduced as well as those concepts which are blended with r and r'' . This relation of intermediary between two others must always be present, even though the degree of reproduction be very slight. This is the general law in all series.

169. Whether, and in what way, the kind of reproduction is limited, depends upon accompanying conditions, as follows :

A. If in the sense-perception the series a, b, c, d , etc.,—or rather if, instead of the latter, the conceivable continuum can change its order by all possible trans-

positions (e. g., as in $a c b d$, $a d b c$, etc.)—then each time, from the perceived succession, a new succession arises in the reproduction. But in this case the laws for reproduction become so involved that no perceptible order remains (as if a number of small arches of different curvatures were attached to one another).

B. Let it be assumed, however, that the sense-perception is reversed—i. e., the series $b c$ is changed into $c b$ and $a b c d$ into $d c b a$, etc.,—the relation of the intermediate concept *between* two others will never be changed for any other; moreover, the series of concepts might begin here or there, and there be no definite starting-point. The law of reproduction arising from this furnishes a spatial concept with a progress from each point in the series toward at least the two opposite sides.

170. Let there be a definite starting-point, and for the rest let everything be as heretofore; then arises the most general form of the concept, namely, that realized in the series of numbers.

171. Let the beginning point be dispensed with; then the perception series runs without reversal, constantly in one direction; then also the reproduction can take only this one direction. Now if, while the perception is at d , a is at the same time reproduced, then from d the series $a b c d$ is recalled back to a ; the same series, however, will be held in consciousness by d , according to another law (as in section 29 c recalls b and a). From this arises the representation of the concept of time.

172. First, for illustration, we may remark that in the soul the concept of space is not itself extended, but is necessarily completely intensive, and that time does not elapse during the representation of the temporal

to such an amount as to equal the time represented. As for number, its fundamental idea is only that of the more or less; the one, two, three, etc., together with the inserted fractions, are only transferred to this fundamental idea. The abscissas of analytical geometry are the true and complete symbols for the notion of number in its universality.

173. The original apprehension of the eye can not be spatial; for the perceptions of all colored places converge in the unity of the soul and in this every trace is lost of right and left, above and below, etc., which found a place upon the retina of the eye. The same is true of touching with the tongue and the hands.

But in seeing the eye moves; it changes the center of its surface of sight. By this movement there is a constant blending of the concepts gained, an incitation of those which are strengthened by perceptions of what lies outside the middle of the field of vision, and an innumerable multitude of reproductions interlacing one another—all these are combined, and for them no words could be found if we, educated as we are, were to meet them as new objects. Those born blind who subsequently attain sight, already know space inasmuch as touch prepares for them successions of reproductions similar to those which sight furnishes more conveniently and more rapidly. By this we see how two widely differing senses produce the same result.

174. The concept of space relations demands a succession that takes place in the act of representation, for it depends upon reproductions which are just occurring. In this connection two points are to be observed:

(1.) The succession in representation is not a represented succession.

(2.) It does not require a measurable duration of time, but only an imperceptibly short interval, especially as by the movement of the eye in its field of vision numberless apprehensions of colored surfaces at every movement arise simultaneously and act upon the concepts previously gained, both strengthening and exciting them. The spatial seeing includes in it an infinite variety of extremely weak simultaneous reproductions which are united with the apprehensions actually taking place, which latter in themselves alone would not be considered to be spatial. Since in this spatial seeing it is not necessary that any single reproduction series should require a perceptible length of time to pass before the mind, no measurable duration is necessary for it, and therefore it appears to us as though space intuitions are quite simultaneous and entirely free from all succession in time.

175. In order to distinguish between time and space perceptions in their origin more accurately, we may suppose the following case:

From a , two series, $a\ b\ c\ d$ and $a\ B\ C\ D$, may begin both of which are presented to the attention simultaneously. Up to this point in the representation there is nothing temporal nor spatial, nor is there anything of the kind if, after the whole series of perceptions is removed out of consciousness, at some later time a is again brought into consciousness and then both series are simultaneously reproduced. Such a reproduction is rather an example of the kind that we are accustomed to attribute to memory, in which time is consumed, but no time and no space represented. The matter is dif-

ferent if, while D and d are still perceived (or thought) a again rises (perhaps on account of a concept similar to it that has just now arisen), and recalls to mind the remaining terms of its series. For then this successive recollection of the several terms occurs during a simultaneous collective presentation of the whole series as remarked in section 171. Thus the collective survey of the earlier and later moments of time and the view of the time extension would be accomplished, whereas those persons who could not hold together the beginning and the end of the series, and could not observe a transition from the former to the latter, would never know anything of time. We should get still another result if a should not immediately rise again, but if a series $\epsilon \eta \delta$, should enter between D and d which in the perception goes from D to d and also backward, and if, moreover, the perception should return also from D through C and B to a , and from d through c and b to a . By this D and d would diverge, and the differences between that which was the first and that which was the last would be obliterated; the different series would in the reproduction converge from all points toward one another at any new excitation, and the apprehension would be spatial.

Both propositions in section 174 apply to the representation of the temporal. We consume only a short time in representing to ourselves a whole year or even a century, provided the partial concepts in the series here necessary are blended with one another; the time, however, which we consume is not represented in the object. The concept of a period of time arises when one runs through the time series backward and forward with equal facility.

176. It is possible only for educated people to comprehend long extensions in time. In its earliest years, the child can realize only very short periods of time. The reason lies simply in the necessity for reaction of the later concepts upon the earlier ones in the series (section 171). The child has great susceptibility (section 47): for this reason, and, because the complexes and blendings possess little strength, the impression of the present moment throws the one previously apprehended too quickly below the threshold of consciousness, and thus long series can not be formed.

177. Psychologically considered, everything temporal and spatial is infinitely divisible; for it depends upon such remainders of one and the same concept, as $r, r', r'',$ etc. (28). If there could be only a definite number of such remainders, then also a corresponding number of different laws of reproduction for the same concept would be possible. But the whole concept is in no way a complex of such parts as those remainders; rather, all obscurity by which the remainders arise is accidental to the concept, and even opposed to it. Since here the whole precedes the parts, so the division has no limits, and the possibility of different laws of reproduction is likewise unlimited. Thus it happens that for the senses and the imagination, in space and in time, the whole appears to precede the parts, and from this arises the contradiction in the notion of matter. (See Introduction to Philosophy, section 119.)

NOTE 1.—Geometry is to be considered in this connection. On account of the infinite divisibility of space and time it needed its incommensurable quantities. From this, however, much evil has arisen for metaphysics, which was so incautious

as to consider this view of space to be the primary and only correct one.

NOTE 2.—We have proceeded from spatial and temporal relations, but not from space and time. To make the former dependent upon the latter is an error which can not be explained here. Empty spaces are seen just as empty intervals (pauses) are heard, viz., by expecting that which is omitted. Concepts already present are in these examples carried further forward; in the empty spaces or time intervals they sink constantly, however, until something new is given, which now becomes blended with the remainders still in the mind. If the transfer be continued further, and exceed the last conceived limits, then, there being no other limits, infinity is disclosed. Not only the given forms, but also the forms gained through free rising concepts (to which belongs the creation or construction of geometrical figures), offer very rich material for investigation if we consider the difference of their apprehension from different points of view.

NOTE 3.—For the explanation of the beautiful in space, we must take into consideration not only the favoring in the reproduction of the series which variously unite, but especially we must consider also the effort to blend all things beheld into a one. The latter act has some analogy with the blending before the arrest (section. 34). All forms approaching roundness respond to this effort, while on the contrary the angular, the extended, the crooked, resist it. Variegated flourishes please for a time, but we turn again to the more simple. Works of art are for the most part interesting for what they say or signify; the pure space relations with their peculiar beauty are often forgotten.

178. By way of supplement we may add a word upon the origin of concepts of intensive magnitudes. The question here is, What is the origin of the standard which we use when we characterize our simple sensations as strong or weak? The reawakening of similar old concepts alone does not suffice for an explanation; for, in the first place, the concept does not adjust itself to the strength of that which is reawakened, although the awakening occurs through its own

forces; in the second place, the result is only a blending of the old and new, but it is not a measure of one by the other. We have here one of the numerous examples of that class of psychological problems which are scarcely ever observed on account of their simplicity, but which are very difficult to solve. The reason seems to lie in the law of helps (25). These helps have their measure, not merely of time, but also of strength, up to the point to which they endeavor to raise the old similar concepts. If the approaching new perception be too weak to furnish free space enough by resistance to the hindrances of the former old concepts (26), then the effort of the helping concepts remains unsatisfied and arouses the disagreeable feeling of weakness, opposed to the pleasant feeling described in section 37. If the new perception be stronger than might be necessary here, then the percipient would feel himself raised out of his accustomed sphere, for the helps can not make it equal to the former old concepts. The pleasantness of this feeling lies, nevertheless, in the favoring of those helps. It is hardly necessary to mention what is presupposed here, viz., that the old similar concept is united with some kind of a helping one. The more there are of these, and the more equally they work together, so much the more accurate will be the valuation of the intensive magnitude.

Here belongs the investigation into the time-standard (*Zeitmaass*).

NOTE.—In my lectures upon general metaphysics I shall discuss in detail the three dimensions of space, likewise the development of the idea of number and its relation to logical general notions, which discussion has no place here, though it is indispensable in metaphysics.

Supplement.—The Difference between Series.

In the foregoing, the dependence of the psychical processes upon the form of the series has already been made clear. As the latter will appear still more in the result, it is to the purpose to observe the possible differences of the series in general :

(1.) The series are longer or shorter. In order to bring this comparison back to a definite point of view, let us take the series $a, b, c, \dots q$, so that a remainder from a may be blended with p , but none with q , then a will work so as to reproduce p ; on the other hand, b or c may be combined with q or r ; in this way the series may be prolonged indefinitely, but there is no immediate connection between the beginning and the end.

(2.) The degree of union among the terms is stronger or weaker.

(3.) The series are throughout similar or not, as well in regard to the strength of their terms as to their degree of combination. The strongest terms or combinations are either at the beginning, in the middle, or at the end.

(4.) Often several series serve for one—e. g., after frequent repetition. By this the dissimilarities may be lessened, but often the beginnings only are strengthened. If this should not happen, then the series must not receive additions at the end, but at the beginning—e. g., $c d, b c d, a b c d$.

(5.) Many series return into themselves when either the beginning or one of the later members is repeated.

(6.) In the case of dissimilar series the stronger terms often form a series among themselves. It is

then in the power of reflection to reproduce the series either in the form of a summary or synopsis or more in detail.

(7.) In complicated series often a term (or several terms) has a side series—i. e., a series whose course does not lead into the principal series; also one term may have several side series, so that either one series or another may proceed from it.

(8.) The side series may progress simultaneously, in which case, however, provided they are not to coincide, a third series must be interposed between them, just as several radii of a circle have between them the surface of the sector (which contains innumerable possible lines).

(9.) In the case of complexes of characteristics (of which kind are all notions of objects that appeal to the senses) each element of the complex (every sensuous characteristic) may be the beginning point of a series—e. g., a series of changes.

(10.) Series which begin simply may later on flow together into a complex.

This discussion may be sufficient here to indicate the number of possibilities which must be kept constantly in mind at one time in order to study the psychological mechanism accurately.

In this we must not overlook the fact that the reproduction fluctuates between two kinds of opposed possible influences. Either reflection may be added (this proceeds from a more powerful mass of concepts, generally from free-rising concepts, section 32), or there is present an arrest by which either the reproduction of the principal series or side series is stopped. In the latter case, in dreaming (or in feigning) we combine

series which when we are fully awake require many series between them if they do not even neutralize each other, as, for example, in a dialogue of the dead, in which Alexander, Hannibal, Cæsar, and Napoleon converse with one another. In regard to what concerns free-rising concepts, the latter can not be considered to be such absolutely, but only in relation to the mental state and the surroundings. Observations of this kind require a practical experience which can not be taught.

CHAPTER II.

THE DEVELOPMENT OF NOTIONS.

179. ALL our concepts without exception are subjected to the laws of arrest, of blending, etc. They may constitute the source of the feelings or they may struggle for realization as desires, etc. Then where do notions (*Begriffe*) have their seat or whence do they come?

At the beginning of Logic (Intro. to Phil., section 34) it has been said that our concepts collectively are notions in regard to that which is represented by them. Hence notions exist as such only in our abstraction; they are in reality quite as little a particular kind of concepts as the understanding is a special faculty, outside, and by the side of the imagination, memory, etc. From this it may be remarked furthermore that, because all concepts without exception may be expressed as desires and feelings, the union of the so-called practical with the theoretical understanding is no mystery,

but self-evident, inasmuch as here two kinds which must first be combined are present, rather the practical understanding and the theoretical understanding are two imaginary objects which we have first created through our abstractions and then considered to be something real.

180. The delusion, however, that notions are a peculiar class of concepts has its source principally in general notions. (In his *Logic*, Kant posits the essence of notions directly in their generality.) It might occur to one that perhaps under certain circumstances the laws of arrest between concepts might effect a separation of the dissimilar from the common characteristics of concepts, such as logicians unhesitatingly ascribe to the faculty of abstraction; but investigation teaches that such a faculty belongs not merely to the creations of fancy, but to impossibilities. From complexes and blendings which have once been formed nothing can be separated. Partial concepts in a complex or blending carry every arrest in common, and hence remain constantly together; and from simple sensations one can not even in thought separate anything and leave anything else remaining. How is the general notion of color to arise from red, blue, and yellow? What are the specific differences here from which abstraction is made? No one can give them.

General notions which are thought merely through their content without the introduction of the products of representation for the sake of applications are, as already remarked (78), logical ideals, just as logic as a whole is, so to speak, the ethics of thinking, but not a natural history of the understanding.

Hence we can only ask, How is it that we construct

such ideals and approach nearer and nearer to them? The answer, by means of the judgment, has been given already, and we must now develop it. In this certain total impressions of similar objects are presupposed as raw material from which general notions are gradually constructed. These total impressions are, however, nothing but complexes in which the similar characteristics of the partial concepts have a preponderance over the different characteristics. Such excess becomes gradually stronger and more decisive. At first the repeated apprehensions of similar objects form a time series (we remember when and where and in what order we have seen such objects). If the series becomes too long, however, it ceases to develop further; but the frequently recurring becomes a permanent concept which remains in a condition of involution (31). The arrest among the concepts of different characteristics has caused their permanent obscuration, although they have not been entirely separated from the concept of what is of the same kind.

181. What happens to concepts when they unite into judgments, and why do they so often occur in this form?

Judgments can not be mere complexes or blendings; otherwise subject and predicate could not be separated, rather they would flow together in such a way that they would be represented as an undivided unit, without a trace of the union. The subject, as such, must fluctuate between several conditions, inasmuch as it must stand opposed to the predicate as the one capable of being determined by the latter. If this requirement can be complied with in more than one way, then there is more than one source of judgments.

182. First, those collective impressions from similar perceptions flit from one to another of the several characteristics. He who has seen a man often in various attitudes, now standing, now sitting, now working, now resting, has such a wavering collective concept; he who sees him now again, decides, by aid of the collective concept, as to his present attitude, and thus a judgment is formed. A multitude of negatives (indicating the conditions in which he does not find him) are contained in this, though hardly observable, but they will become perceptible in cases where the expectation is contradicted. He who to-day sees a tree from which the storm of last night broke a branch, judges first negatively: the tree has not its branch; it is broken, splintered in this or that place, etc.

183. Secondly, a multitude of concepts are aroused in a person looking upon an object new to him, which concepts are reproduced, to a limited extent, on account of a partial similarity to the object mentioned. The new concept, as the one to be determined, fluctuates between the old concepts, which constitute the determining characteristics. And from this arises the question, What is this object?

184. Thirdly, those collective concepts in which series lie infolded (31) are to be regarded as subjects whose predicates appear one after the other in the unfolding.

185. Fourthly, the fluctuation between different mental states gives to the concept to which the fluctuation is attached the place of the subject.

186. Fifthly, and principally, on account of its fluctuating among several significations, each word in the language is fitted to be the subject of a judgment.

A sign that was repeatedly affixed to the objects indicated, with their changeable accompanying conditions, carries the total impression of the latter with it; now, if with it a more definite object is to be designated, then the total impression must be corrected; this correction occurs through the predicates, which, however, in a developed language are often changed into adjectives, or are clothed in other kindred forms of speech, so that only the most important among the corrections are expressed in the form of predicate. Children, on the contrary, speak in short sentences; they know no full, rounded sentences as yet. Their concepts arrange themselves in the form of judgments shortly after they have learned the words.

187. When one hears a judgment expressed, there are for him two cases possible: either the predicate is found among the several characteristics between which his concept of the subject fluctuates, or it is not. In the first case, there is no doubt but he will understand the judgment as such. We must make further distinctions in the second case. The predicate either agrees with these characteristics or it does not. If the former is the case, then with the act of apprehending arises a combination of concepts which is no judgment, but plainly a new complex or blending. Thus when something is related to us, we, unperceived, arrange the individual features presented together in a picture, without thinking that the narrator has made use of those forms of speech which are employed to unite the subject with the predicate. If the predicate, however, is opposed to those characteristics, then still another distinction must be made—viz., it is either in contrast or in complete opposition to them. The first

requires a certain kind of complexes which were definitely given in the foregoing (35), and the result is that the judgment as such is to be perceived as a paradox or as false. In the case of complete opposition, however, the judgment appears not so much false as senseless.*

188. On the contrary, intelligible speech, above everything else, must be connected; it must hold fast a significant portion of the concepts present, and he who holds fast the whole connection will understand best, and will perceive all the reciprocal influences that prevail with it. Hence the understanding ranks

* [The first edition of Herbart's *Manual of Psychology* discusses as an example:] "Psychology has need of the differential and integral calculus." This statement should appear acceptable to those who have considered before that all objects of inner experience are presented as changeable magnitudes, and who, besides, know how important it is to be acquainted with the general laws according to which changeable magnitudes depend upon one another. Others who have never thought of mathematical calculations in connection with psychology will consider this sentence historically, perhaps, indeed, as a literary peculiarity. Those, however, will name it wrongly who have elaborated the differential and integral calculus constantly with a view to an application which requires magnitudes that may be measured and sharply observed, which it is true may succeed in the outer but not in the inner experience. Finally, many will find the foregoing sentence quite senseless, because they do not know in the least how to compare mathematics and psychology, but regard the two as opposites, like death and life.

(188) The senseless, inasmuch as it fixes the limits for that which is intelligible, teaches us to know the understanding and its operation more accurately. Mere opposition without contrast only causes the opposed concepts to sink, and this is just the influence of the senseless—it expels, it kills thought, while contrast elevates at least some thoughts.

as a finer sense. We say a discourse has sense and intelligence, it is full of meaning, etc.

NOTE.—It is a very important fact that in music also the distinction between the senseless and the intelligible is made. Those musical composers who strive after contrasts sometimes touch upon the former condition. The intelligible, however, is not for this reason by any means also the beautiful. Besides, music is so like discourse (with its periods, its premises, and conclusions) that ignorant or enthusiastic people very easily imagine that music says something to which only words are lacking. Thus, in its highest eloquence, music is held to be a dumb creature. What it wishes to say, however, that it expresses perfectly and completely, and translations of its meaning into another language are extremely poor. Music has its understanding in itself, and by this it teaches us that the understanding is not to be sought in any kind of category whatever, but in the connection of concepts with one another (of whatever kind the latter may be).

189. The development of ideas is then the slow, gradual result of continuous judgment. It may be observed here that poor languages appear to use many metaphors, which indicates that remote similarities suffice to reproduce old concepts and blend them, together with their names, with the new. From this condition human thought passes to an ever greater and finer division of thoughts. At one time the complex A may serve as subject for the predicate a , at another time for the predicate b , then in bringing together the two judgments, the contrasts between a and b will not only be felt (section 35), but will also be expressed or clearly thought in the judgments; this A is a , and that A is b . Here, in the representation occurs an intentional discrimination, by which, however, the representation is in no way divided into two

separate acts, but the psychical mechanism always holds together the separate parts.

190. A multitude of such judgments as A is a , A is b , A is c , A is d , etc., by which not one and the same A is to be taken, but several, with the opposed a , b , c , d , of themselves form a series; since the a , b , c , d , blend in different degrees according to their lesser or greater contrasts (e. g., the three judgments—this fruit is green, that yellow, a third yellowish green—blend in such a way as to bring with them the colors in their orders—green, yellowish green, and yellow; for between yellow and green the opposition is the strongest, consequently the blending the least). From this arises the relation between the genus A and its species (A which is a , A which is b , etc.). At the same time between these species, on account of their differences a , b , c , d , there is a variety of reproduction laws, and from this arise the vaguely comprehended series, such as the gamut in music and the spectrum in color. The same A will coincide with α , β , γ , δ , as here with a , b , c , d , in case the species differ from A not merely in one but in several characteristics.

NOTE.—The construction of a series, pedagogically considered, is of the greatest importance, as upon it depends clear thinking, as well as construction of every kind.

191. The more the series of characteristics form and separate in this way, through the comparison of similarities, and in part of differences, so much the sooner will it be possible, by means of them, to determine the content of the complexes, or to approach the definitions of ideas. For now every element of a complex—i. e., every characteristic of a notion—has its

place in one of the series of characteristics. The labor of finding this place is indicated among others in such questions as: How does the object look? How large is it? What is its smell and taste? But, in order to find the place of all characteristics in the corresponding series, a number of reproductions of different series is necessary, which the psychical mechanism will not furnish otherwise than by virtue of a dominating concept mass. The Platonic dialogues show what labor this costs, and how many partly positive, partly negative judgments are necessary to accomplish it, especially with ideas of the higher kinds; and we may perceive in the limited development of the notions of the majority to what a limited extent this labor can be considered as finished.

192. Thus it is shown in every way that the definition and separation of general notions, clear and distinct thinking, are problems which the psychical mechanism does not solve by really separating its complexes, but by allowing each individual element of the same to remain connected with some series of characteristics already formed. General notions are never really thought through their content, but with regard to their extent, though with intentional distinction from it.

193. The attempt, however, to think the notions merely or at least principally through their content, consequently through a summary of the characteristics of the series (which characteristics are no longer gathered directly from experience but from the series of signs already established)—this attempt, I say, effects a remarkable change. It gives rise to philosophizing, and this causes notions to become objects of thought.

The first notions which philosophy discovered were numbers and geometrical figures. Later, the same proceeding extended to all logical general notions. In this province, Plato, who carried out what the Pythagoreans and Socrates had begun, stands at the head of philosophers. The next step is the philosophy of language, inasmuch as the notions are shown as objects associated with the words found in the languages. Aristotle, following a Pythagorean track, sought the categories—i. e., the most general notions in language. The influence of this is threefold :

(a.) The great majority of educated people to whom philosophy at least in part belongs, refer the abstracted notions back again to things. Experience is arranged, scientifically treated, and in the sciences are to be found firmly fixed points of dispute, where it is asked how things are to be correctly thought through notions and indicated through words.

(b.) Philosophers, through the effort, partly in themselves, but in greater part in others, to hold notions fast as objects of thought, are led to overdo the matter by placing notions among the number of real objects. By this the peculiarity of sensuous things (by virtue of which they contain metaphysical problems) aids them in such a way that they are supposed to be real in a much higher sense than the objects of experience. This is a characteristic of the Platonic doctrine of ideas which has its influence even now. Hence the embarrassment of Aristotle, who found sensuous objects, mathematical figures, together with numbers and notions, side by side with one another, and seems never to have succeeded in making their relations clear.

(c.) Another delusion is the one peculiar to the school of Kant, which regards the categories as the fundamental notions of understanding taken as a mental faculty. Traces of this belief appear in Plato and later in Descartes and Leibnitz.

By this the relationship of the categories with the forms of series is obscured, which relationship, nevertheless, is recognized analytically. The categories of the inner apperception are thereby forgotten.

We may observe the principal categories—*thing, property, relation, negative*—at the bottom of which lie the form of judgment and the form of series. The notion of the negative, the *no* in general, is the clearest proof of the existence of such a notion, which in judging arises from experience, although in experience it has no given object.

CHAPTER III.

OUR APPREHENSION OF THINGS AND OF OURSELVES.

194. ENTIRELY of themselves, and without the slightest action which could be called an action of synthesis (63), our concepts become combined so far as they are not hindered by an arrest. Hence, for a child of tenderest years, there are no individual objects as yet, but entire surroundings which, even as regards space relations, only become separated in successive representations (174).

The first chaos of concepts, while it constantly re-

ceives new additions, is, at the same time, subjected to a continuous separation. Not that combinations once completed would ever be broken up (180); on the contrary the number of concepts is constantly increased and their inner contents augmented. But, on the one hand, if the number of distinctions increases (189), on the other hand there are more frequent spatial separations of that which in the beginning was seen or in some way perceived as a whole. The objects move, and chiefly because of this the environment is broken up into distinctions; in this manner a plurality of things originates for man's power of conception. At first the table seems one with the floor, also the table-leaf is one with the table-legs. The table, however, is moved from its place, while the leaf is not separated from the legs. All things that are not removed from one another preserve their original unity in the conception.

195. As the surroundings are gradually separated into individual things, so the things again become separated into their properties (191). If it be asked here to which subject the properties really belong, the answer is: The subject is always the total complex of these properties, provided the physical mechanism represents them in one single undivided act. In this there is no difficulty whatever, so long as not all the judgments through which all its properties are ascribed to one and the same thing are united.

But when the thought once reaches this degree of maturity (which never happens with most men), then the case is different. The judgments have now quite dissolved the complex and have separated its properties from one another as a manifold, and hence one subject will always be presupposed for the many predicates.

This notion has lost its content, however, and here a metaphysical abyss yawns, viz., the question concerning substance (86) as an unknown something, the presupposition of which is so much the more necessary, as it is to be not merely that subject, which never becomes predicate while really the judgments have changed their subject into pure predicates ; but the persistent thing which through all change remains self-identical while, in fact, the complex which serves for the object (in the sensuous world) has not only simultaneous but also successive properties, and hence is in no wise self-identical.

196. The contradictions in the notion of the thing with several properties, and in the notion of change are familiar to us (Introduction to Philosophy, sections 122-135). Here we have only to explain how it happens that the ordinary understanding does not observe these contradictions. The simple explanation upon this point is this: The psychical mechanism possesses originally and quite of itself exactly the unity which the metaphysician loses at the beginning of his investigation, and which the form of experience demands, while the matter even of the very same experience does not admit this unity—for this matter includes the many of the simultaneous properties and the contrast of the successive characteristic properties. In order to represent a material object we do not need nearly so many concepts as sensuous properties, but the unity of the act of representation, which constitutes the nature of the complexes, allows no question whatever to arise in the ordinary understanding concerning the unity of the object represented. To understand this question is always difficult for men, even

after the acts of judgment have long since separated the complexes. Thus the psychical mechanism constantly deceives many who are even philosophers.

NOTE.—It would be quite useless to hope that, in the progress of the sciences, one might perhaps find a more convenient mode of access to metaphysics than that through the contradictions which exist in the form of experience. The unity of the soul is itself the deep source from which that unity enters our act of representation, and which we afterward lose in the object presented. In this and in the completeness and exhaustiveness of those laws of reproduction which are formed according to the principle laid down in section 168 lies the answer to the question as to how the forms of experience may be given (Introduction to Philosophy, sections 119–123, fourth edition).

197. In order to be able to approach the difficult theory of self-consciousness, we must first mention some of the most important varieties in the human apprehension of things.

Objects in motion occupy the spectator more than those which are at rest; for the observation of an object in motion is an incessant interchange of an excited and a satisfied desire. Let the object in motion be in any given place; the concept of it is blended with those of the surroundings. Then let it leave this place, and instead of it something of the background becomes visible which was before hidden by it. This latter perception arrests that concept of the object moved; at the same time, however, the latter will be driven forward by the concepts of the environment which appears the same as at the beginning. Also the driving forward is for the most part much stronger than the arrest, for it depends on a much larger aggregate of concepts than the arrest, which

arises from the view of only a small part of the background; hence the concept of the thing moved is in the condition of desire (36). This desire, however, is satisfied, for the thing moved has not escaped from the field of vision (or from the circle of perception), but only from the central point of the field of vision, and the full gratification will be reached by a scarcely perceptible turning of the eye. Thus the apprehension of the thing moved (of which we have here described the differential) proceeds gradually.

The reason that the thing moved not merely occupies more of the attention but also makes a deeper impression than the object at rest, lies in the multiplicity of small helps, which remain from every environment in which the object has been seen.

198. Since the living object, especially a sentient one, is seen in incomparably more and more varied movements than the inanimate object, we may understand from this why even in the earliest periods of existence, not only man, but also the brute, troubles himself much less about the inanimate object than about the living one. Here, however, it may be remarked that originally things were not regarded as being inanimate, but as sentient; for, upon the sight of an object which is pounded or beaten, a memory of one's own feeling, upon the occasion of similar suffering in one's own body causes one to attribute similar feeling to the object. Where this fails, we have a sign of stupidity; the more sensitive the man, so much the more life does he everywhere presuppose before he tests more closely.

NOTE.—It was an error of idealism, violent in its creation, and adhered to with equal violence that the Ego opposes to it-

self a Non-ego (Fichte), as if the negation of the Ego were inherent in objects. In this way a *thou* or a *he* would never originate—another personality than one's own would never be recognized; that which has been inwardly perceived is, wherever possible, transferred or imputed to the external object. Hence with the *I*, the *thou* is formed at the same time, and, almost simultaneously with the two, the *we* which idealism forgot, and was obliged to forget, if it would not be awakened out of its dream. For the concept of the *we* is quite manifestly dependent upon the environment; it originates sometimes in larger, sometimes in smaller circles, and always so that it at the same time includes the Ego within it. This object is exposed more clearly to our analysis than the mysterious Ego. As Plato regarded the state as a book with large letters legible for weak eyes, in order that one might through it learn to read smaller writing more fluently, so, in order to make a good preparation for the more difficult problem, we ought to investigate the *we* before the *I*.

199. But whence is the concept of a concept? And whence the concept of concept-forming things or objects? At first this question must be taken up in its simplest form. How it is possible that to something extended in space, and to its other characteristics a power of forming concepts may be joined, indeed may be one with it, this hardly any educated, much less any uneducated man considers; but, that there are things which have concepts, even the brute knows. It learns this, inasmuch as it sees that these things adjust themselves to others without touching them.

The common understanding is ready to believe that the needle has some sort of concept of an attracting magnet. In the same way every one is convinced that *A* contains in it the characteristics of *B* if the former shows itself to be definitely affected by the lat-

ter. The characteristics of *B* without its actuality constitute the picture of *B*, or, in other words, the concept of *B*. Now, if *A* is affected by the properties (movements, etc.) of *B*, *C*, *D*, and others in its entire environment, then to *A* is attributed the power of conceiving or representing; and hence, in special cases, will come such predication as *A* sees, hears, smells, etc.

NOTE.—It is almost too difficult a subject for the purposes of the present manual to treat of the categories of inner apprehension—of the object which, entering into the environment (field of vision), interrupts the current of thought by engaging it in the apprehension of this object—and causing it to enter into reciprocal action with it—and which furthermore, in frequent repetitions, pointing back to that which preceded, interferes with the involved time-series of the feelings, whence arises the concept of the subject. Suffice it to remark that the confusions of idealism must be removed by the distinction of the mere subject, as time-existence, from the Ego, although the latter is necessarily connected with the former, inasmuch as, when considered separately, it leads to absurdities.

The gradual penetration of sensations into the nerves (as when the child eats a spicy sweet fruit, or the man empties his glass), likewise the penetration of words heard, or of transactions seen, into the masses of concepts—this internal echo does not call up the concept of the Ego, but only the concept of the subject into consciousness. It is otherwise when we surrender ourselves intentionally to the sensation, in which case the enjoyment enters after and because it is sought.

200. In most cases of the kind just mentioned are *A* and *B*, the representing and the represented, manifestly two different things which in space stand opposed to one another. It is evident, however, that in

case the two happen in some way to be one and the same, then the concept of self-knowledge (consciousness) must arise.

Here let no one ask, how it is possible to apprehend the two opposite concepts, the representing and the represented, as one and the same. This difficult metaphysical problem is, in a psychological sense, quite as simple as the one mentioned above, viz., how the apprehension of several characteristics together make up the concept of one object; or, the still earlier one, how the finite space-magnitudes can appear infinitely divisible. In the soul many representations merge into one act of representation when arrests do not prevent; but how can the slightest suspicion exist originally in the soul as to whether this representation can persist when analytical judgments are applied to it (191), and it is subjected to metaphysical thought?

Let a person look at or touch his own limbs: the spectator, according to ordinary custom of speech, says he has seen himself, he has touched himself. The identity in this self is manifestly not a true one, for the eye and the touching hand are manifestly different from the arm which was seen and touched. However, in the original, psychological sense, the identity exists, for the whole body is regarded as one, because all partial concepts of it are most closely blended. To see or feel one's self is only a special case of knowing about one's self.

201. All this is, however, only a preparation for the explanation of self-consciousness. In the foregoing lies only the beginning of the concept of some one Ego; the concept of *me*—i. e., of my Ego—is quite

different from this. The former is, however, the foundation of the latter, as experience proves, for at first the child speaks of himself in the third person.

On the contrary, the first person, as the first, is the beginning point of a series, and must be explained according to the method of explaining a series (29 and 168-177).

Man, as soon as his ideas of space are in a measure matured, finds himself the movable central point of things, from which ray out not only distances but also other obstacles in the way of reaching the thing desired, and, on the other hand, toward which the thing moves when it is obtained as desired. Thus, egoism [selfhood] is not the ground of desires, but it is a species of concept that can be referred to them. However, the egoism [selfhood] will be interrupted in a person if he assumes another central point of things. To this central point he feels himself inevitably drawn : e. g., as in the sense-world, to the capital of his country ; or in the mental world, to the Deity.

NOTE.—The concept of the *we*, which depends upon the presupposition of common sensation and apprehension, is of the greatest moral and, in general, of the greatest practical importance. It gives a natural counterpoise to the egoism proper. Also the concept of the *we* exists naturally, for no one knows really who he would be if he were to be quite alone. The notion of uprightness and the sense of honor are originated in the circle of the *we*, when it is resolved into a manifold of egos ; but a *you* and a *they* are opposed to the *we* with all the evils of a corporation soul. The most wonderful thing is that we ourselves are now this, now that society ; upon some one point men agree and are friends, upon another they are enemies. In this inferiors are complained of by superiors, in that both unite and complain about their common superiors,

202. The complex which makes up the self of each person receives incessant additions in the course of life, which are blended together with it in the closest manner. If this blending did not take place, the unity of the personality would be lost, as in many kinds of insanity really happens, inasmuch as a new ego is created out of a certain mass of concepts which act separately, and when the masses, as a result of a change in the organism, enter consciousness one after the other, a changing personality also arises.

The additions are not so much new apprehensions of the individual body for which the susceptibility is already very limited (45) as inner perceptions (40) of concepts, desires, and feelings. Hence the concept of the ego tends constantly more to the notion of a spirit which is completely separated, inasmuch as the ego is considered as abiding uninjured by the mutilations of the body, during the changes of life, and even after death.

With every man, the ego develops differently in different concept-masses, and, although, in the person mentally sound, no manifold ego arises, this difference of origination is not insignificant for the formation of character in general and for morality in particular. The boy who is one person at home, another in the school, and still another among his companions, is in danger. The man who has a different tone for persons of rank, for his friends, and for people of a lower order, is not so secure morally as the simple man who remains constantly the same. Among different men, difference is unavoidable, inasmuch as one man feels more in enjoyment, another more in sorrow, a third more in action; and, indeed, some more in inner action

and others more in outer. The former, inner action, often prepares the plan outlined for the latter. The mystic and the propagandist of liberty are most widely separated here; the former considers himself obliged to destroy the individual will, to give up the individual ego; the latter preaches the absolute independence of the ego. Most rarely, however, is to be found the self-delusion of those who, in the midst of mysticism, wish still to assert their personal freedom, in order to combine everything that has a good sound. It is useless to talk to such people of a middle course. They have from the beginning missed the right way, and, in order to find it, must go the whole way backward.

203. We receive a correct notion of ourselves through the notion of the soul, but not directly through that of the ego just explained. Indeed, the latter must be transformed into the former; for the ego of the ordinary understanding contains purely accidental characteristics, which ego, by means of analytical judgments (of answers to such questions as "Who am I?"), reveals [its composite character] just as the concepts of material objects are resolved through judgments (195) into pure predicates whose subject, long a gratuitous assumption, is finally lost altogether. These judgments, inasmuch as they separate from it all that is individual, leave nothing remaining in this ego except the idea of identity of the object and subject. This latter is a contradictory notion whose transformation into that of the soul is the business of general metaphysics, just as the idea of substance, force (196), spatial and temporal things (177) are transformed into the theory of simple essences and of their disturbances and self-preservations.

NOTE.—The contradictory notion of the pure ego is the metaphysical principle from which has proceeded all the systematic investigations which lie at the foundation of the present treatise. The ego as a metaphysical principle knows and contains none of the distinctions which are found in the actual ego and which arise according as a man feels himself depressed or elevated, and either stimulated or wearied in his efforts. Now, if it be asked how these distinctions arise, the answer is, Investigation itself, impelled by the principle, demands such variety and such contrasts, and leads to the path along which we seek them. It is the peculiarity of true metaphysical principles that they point back beyond themselves to the connection of inner experience. If the connection in experience were known through mere experience, then no metaphysics would be necessary, and such a science would not have arisen at all. The movement of thought, however, which metaphysics secures in different problems is only in the smallest part uniform; hence a very varied practice is required. The spirit of investigation is not promoted, but destroyed, by the ruinous tendency to smuggle everything into the four-cornered box of the so-called categories, or into the three-cornered one of thesis, antithesis, and synthesis: one of these mannerisms is of as much value as the other.

204. It is now possible to explain the meaning of intuition (*Anschauung* = sense-perception), an expression which has been subjected to a wicked misuse. Intuition (*Anschauung*) means the apprehension of an object when it is presented, as such, and as nothing else.

The object must stand over against the subject and also other objects. To find it thus is possible after the ego, as first person, has been assumed spatially as the center of things. Usually the object will be found to be a complex of properties, like sensuous things; these properties, however, must first have been separated from the whole environment (194), in order that the apprehension may seize the object as this and as no other. By such separation, the object appears,

as it were, upon a background of earlier concepts which it at the same time reproduces and arrests; itself receiving thereby definite outlines as well in space as in every other respect. For this reason, every intuition (very unlike the mere sensation) has the tendency to burst at once into a variety of judgments (182) which for the most part stifle one another, partly on account of the arrest among their predicates, partly because they can not all find words at the same time; often, also, because the apprehension leads from one subject to another.

For this reason intuition is a very complicated process which must be prepared through many earlier acts of production (not through any kind of forms inherent in the mind), and which then, with psychological necessity, results as it can, it being all the same whether an actual object or a delusive form be constructed. To test this is the business of thought, give it what other name we may, and no intuition can anticipate the decision of the latter (thought).

Finally, passivity in intuition (which is expressed by the word apprehension, viz., the reception of a thing given) is not really a passive condition of the soul by which intuition is produced, although it is without any consciousness of activity; but those concepts stand in a passive relation and upon them as a background perception draws its outlines, or (without a metaphor) these, by virtue of the similarity which they have with the perception, are reproduced by it, but, on account of dissimilarities, are arrested by it.

This peculiarity in sense-perception or intuition by virtue of which the older concepts are acted upon by the new perception, can, however, revert easily and

rapidly into the opposite if a long succession of observations does not hold the mind in its passive state ; and we have already indicated what occurs in such a case (39). The intuition is then at an end ; instead of it, memory, imagination, thought, begin.

CHAPTER IV.

THE UNGOVERNED PLAY OF THE PSYCHICAL MECHANISM.

205. ON account of the limitations of this manual, we shall, to the subject of self-control and its opposite (practically so important), unite the consideration of other points which, in an elaborated treatise, would require to be discussed more in detail.

Independently of an internal dominating influence, the mental activity may have its origin either in the concepts themselves, or in the physical organism, or in external impressions.

206. A small number of concepts, if left to themselves, would very soon approach a statical point, and would retain only a very slow movement toward it, through which it (the statical point) would never be quite reached (17).

A considerable change in this movement is effected, however, through the great number of concepts, and the very complicated combinations of them, which a man gains in the course of time.

207. Take a series of concepts in the process of

elapsing [i. e., passing through consciousness]: every moment there is a change in the arrest, which the concepts that are entirely or almost removed out of consciousness suffer. Some may become active because they are less restrained by others; others will be reproduced by such members of the passing series as they resemble. But the reproduced concepts may have their own series, which also now begin to pass through consciousness and thus these series become complicated with one another as well as with the first one. There arise from this complication new arrests and blendings. Through such new combinations, however, new total forces (23) are formed, by means of which the statical points become displaced; consequently new laws of movement are secured.

A manifold change of mental conditions (33-38) can by this hardly fail to occur. Such a change brings the physical organism into play, which influence, mingling with the others (we shall not consider it further here), causes the matter to become still more complicated.

With this play of the imagination (for it is imagination more or less active) are combined very often actions in the external world; and the audible expression of thought is only one species of this. With children who have not yet learned to restrain themselves, such expression of that which goes on in the soul is the rule. To this (expression) is added the perception of the product of the expression, and this influences the course of the psychological process.

208. The flow of human perceptions, if it is in any way rapid, does not allow to the concepts which it calls up, time to place themselves in equilibrium with

one another: the preceding ones are thrown by the succeeding ones upon the mechanical threshold, without forming those combinations which they are capable of making; and, provided the influx of the new concepts continues still longer, the statical threshold is very soon developed from the mechanical. On account of these premature arrests, a mass of undigested matter is collected which is gradually elaborated when subsequent reproductions bring it again into consciousness..

209. The later elaboration of the material previously collected is the more important since the older concepts are generally the stronger on account of decreasing susceptibility. The elaboration, however, will be more difficult the longer it is delayed, for the reason that, in consequence of the constant influx of new perceptions, the mental state, together with the corresponding physical condition, constantly changes, so that the older concepts with the combinations that have previously been made become less and less fit for this modification; consequently, their reproduction is attended with increasing hindrances. In this may be found the explanation of the fact that that which is not frequently recalled to memory sinks further and further into oblivion. Accurately speaking, however, nothing in the soul is lost.

210. The purpose of the elaboration is determined by the purpose of the reproduction, for those concepts which are reproduced simultaneously, and no others, enter into new and closer combination.

NOTE.—Some of the principal pedagogical notions are connected with this principle. Among others we may mention first of all the distinction between analytic and synthetic instruction.

The former occurs through reproduction for a purpose; the latter seeks to produce a combination of new concepts in conformity with a purpose. Furthermore in this connection belongs the universal requirement that absorption (*Vertiefung*) and self-possession (*Besinnung*) should alternate with each other like a sort of mental respiration. Absorption (*Vertiefung*) occurs when some concepts are brought, in their strength and purity, one after the other (as free as possible from arrests), into consciousness. Self-possession implies the collecting and combining of these concepts. [*Vertiefung* signifies that absorption in the details of some object which is attained when we lose ourselves in its contemplation. *Besinnung*, on the other hand, is the recovery of ourselves which is attained when we subordinate the object to the unity of our knowledge; by this we *come to ourselves* or *to our senses*.] Both take place as well in analytic as in synthetic instruction. The more completely and the more accurately these operations are performed, so much the better does the instruction prosper. (See the author's *Allgemeine Pädagogik*, at the beginning and end of the second book.)

211. While, for the reasons above mentioned, concepts, when they constantly follow the tendency toward equilibrium, thereby change from one movement into another, they become more firmly and more variously interwoven, so that each excitation of a single one among them is communicated more and more to the remaining ones, thus assuring their reaction. In other words, the play of the imagination partakes more and more of the nature of thinking, and man becomes more and more intelligent. For the intelligence has its seat in this general connection among concepts, but not in notions and judgments taken individually (188). With this, however, a gradual cultivation of notions and judgments is combined, inasmuch as the circumstances which were considered above occur in this connection (179-192).

212. As no man lives alone, but humanity exists in the form of society, it may be remarked here that conversation is the ordinary stimulant for the imagination; customs and general opinions, however, are usually the halting-places in which concepts become so crossed and interlaced that, from there on, each movement of the concept receives a determinâtion (or direction) or as we also may say, common understanding is based upon common opinion, which, by the way, may be groundless and untrue, therefore may in a higher sense of the word be strongly opposed to the understanding.

213. A man's sense-perception (*Anschauung*) and attention, in general his interest, depend upon his imagination and thought. Even in the same surroundings every man has his own world.

Attention is partly involuntary and passive, partly voluntary and active. The latter, being connected with self-control, will not be considered here. The former has its foundation in part in the momentary attitude of the mind during the act of observing (*Merken*); moreover, it is partly determined by the older concepts which the object observed reproduces.

(a.) During the act of attention four circumstances are to be observed in the mental state, viz.: the strength of the impression; the freshness of the susceptibility; the degree of opposition to concepts already present in consciousness; and the extent to which the mind was occupied previous to this act of attention.

(b.) In regard to the co-operation of the older concepts reproduced, these latter may be unfavorable to the involuntary observation, because of the fact that too little or too much is in consciousness, inasmuch as in

both of these cases it is impossible for that which is newly apprehended to adjust the mental condition to itself. For, if the new concept finds nothing, or too little, of the old with which to combine, it is of itself generally too weak to resist being overpowered by other concepts which have already proceeded further in collecting and combining. If, however, too many similar old concepts present themselves in consciousness, they weaken the susceptibility for the new. On the other hand, the act of observing will be promoted by two circumstances: first, when the new is contrasted with the old, by which the reproduction is strong enough for union without doing serious harm through an excess of susceptibility; second, when a reproduction of old concepts is promoted by the new, and the old concepts would have striven after this in any case. In this case it establishes new combinations, while it gratifies a desire at the same time, or at least brings up a pleasant feeling. This happens especially with previously aroused expectation.

NOTE.—Attention and expectation, as the two steps of interest, belong likewise to the fundamental notions of general pedagogy.

214. Among these excitations of the psychical mechanism which have their origin in the physical organism, we may be here allowed to pass over such as present more physiological than psychological phenomena—i. e., those in which the bodily needs are to be considered.

Generally, however, it is very clear that every physical feeling is in a condition to bring the series of concepts that are complicated with it into consciousness;

and that these series of concepts will come up so much the more certainly, since with all other concepts other physical feelings are connected (weak as they may be), and to these physical feelings may correspond other physical conditions which can not be brought up now. Upon this ground, we should expect a greater (rather than a less) dependence of the mind upon the body, than that which experience shows us.

215. Moreover, the changes in the physical condition must correspond to the changes in the mental state, and to the movement and interaction of the concept series. By this the measure of time and the velocity of the mental change may meet a favorable or unfavorable condition of the body which suffices to explain the alternating pleasure in, and inclination toward, this or that occupation, provided no purely psychological reasons influence it besides.

NOTE.—That play of the psychical mechanism is especially an uncontrolled one, or at least one difficult of control, which arises when the velocity in the change of bodily conditions increases to an unusual extent and thereby hastens the corresponding course of the concepts. Such a phenomenon occurs in the transition from illness to health; during the development of puberty; in many conditions of sickness, etc. The imagination runs away from the understanding; in other words, the rapidity of the self-developing concepts increases the violence with which they remove out of consciousness those concepts which could resist them.

216. The foregoing acquires a greater practical importance when, behind the manifold and variable coloring of the Ego (202), we attempt to investigate the persisting individuality of man. That coloring offers itself to the observation of the practical educator, and

is difficult to distinguish from the Ego. Here belong the following considerations :

(a.) In a condition of complete health, at least of the mature body of a man, the influence of emotion upon the body (100) ought not to be apparent at all, or at the most should occur only to a limited degree ; so that no perceptible reaction of the mental activity upon digestion and circulation, or the reverse, should take place. The intrepidity of the warrior in the midst of danger is (not without reason) called cold-bloodedness.

(b.) On the contrary, in every human organism actually exists a system of possible emotions predisposing it in such a manner that a careful education only delays, rather than removes and avoids, the outbreak of these emotions. For this reason no man can be entirely spared the experiences to which he is predisposed, because he will bring them upon himself.

(c.) The explanation of the variety of ways in which physiological pressure (50) arises from the organs and systems of the body belongs to physiology, but the changes in the mental activity which this pressure may effect must be ascertained from a knowledge of the psychical mechanism and of its manifold possibilities of arrest. The least difficult of these are the following :

(1.) Under the influence of this pressure, instead of immediate reproduction taking place, obscurity arises, inasmuch as the new concepts obtained through new acts of perception do not so much create free space for the older similar concepts as that the concepts already present (which had attained equilibrium with the pressure) weaken in the reaction ; so that now the in-

fluence of the pressure increases, and the older concepts, which were to receive and appropriate the new, only present themselves in a disturbed, scanty way. Hence, very often, where lively interest would be expected, a stupid astonishment is exhibited.

(2.) The same pressure retards much more easily the vaulting, consequently also the pointing or tapering; hence the concepts do not stand out sharp, although they are distinguished from others, as in the case of men who intuitively perceive nothing, who comprehend nothing in its full relations, and who have no fine feeling, while they perhaps learn by means of mechanical application.

(3.) With many persons the pressure is not constantly effective; it appears only as a reaction in consequence of the tension proceeding from the mental activity. Such minds are active and easily aroused, but without depth and sequence. For every moment their thoughts are cut off or separated; they can only construct short series of concepts. They do not like to be alone, because they are incapable of following a line of thought.

(4.) If a constant pressure acts upon free-rising concepts (32), their movement is disarranged, as it enters into conflict with the strongest of the concepts which ought to rise the highest; and by means of this conflict the weaker concepts become free to enter consciousness in place of the former. Under such conditions, active and energetic minds show themselves uneven (rhapsodic) in their action. They may be brilliant, but, unless great care be taken, their culture will have rents and fissures.

(5.) We find the rhythm of mental movements in

general very different ; hence for this reason some attain better that which is quickly, others that which is slowly, done. These indications of very complicated investigations may suffice here.

217. The different concept-masses depend upon outside impressions derived from the environment. Every new environment, indeed every new condition of life, brings its own masses of concepts in great part, but not entirely separated from the others. Among these masses the right relations necessary for self-government do not by any means always arise. Here instruction and all kinds of educational training have their use. We shall first consider here not the reciprocal action of concept-masses upon one another, but the external relation of the man to his environment.

218. After considering, in the above, the excitation which brings forward new perceptions, we regard the external world here as the sphere of action ; and this is the seat of hindrance to action as the second aspect of the external world in its function of arousing mental life. The connection between representation, action, desire, will (the words are placed in this order intentionally), must now be more accurately developed than before (52).

Movements in different parts of the body, and the feelings arising from these movements, are the conditions that combine the functions of body and soul. If, with the feeling, some kind of a concept, perhaps of the member moved, or only of an external object, be united, then every excitation of this concept, in case no hindrance intervenes, effects immediately a reproduction of the former feeling, and of the movement belonging to it. In regard to the latter, it will not be

necessary that the concept be in a condition of desire, but without anything further it will be accompanied by action. (This is the case with the lower animals and with children; only the mature human being knows the restraining influence of other concept-masses.) Further investigation of this requires the aid of the theory of the concept series.

219. In a series, a, b, c, d , let the concept just mentioned, which is immediately accompanied by an action, be indicated by d ; if the action meets no hindrance in the external world, then it occurs without being noticed, and the series runs further on into consciousness to e, f , etc., as though no action had occurred. Examples of the above are to be found in the movement of the eyeball, also in many movements of the organs of speech, while the movements of the arms and legs, on account of the weight and inertia of these limbs, belong in this respect to the following cases:

If the action find a hindrance in the outer world, the feeling belonging to the action is arrested, and by means of it the concept d is also arrested. Since d is blended with a remainder of c , a smaller remainder of b , and with a still smaller remainder of a ; furthermore, since the rapidity of the effect of these remainders varies according to their magnitude, and is in each case a different one, while the passage of the series is stopped, the smaller remainders gain time to co-operate as helps to d , and to strengthen one another. If no hindrance had existed, then c would have acted first upon d , and the smaller remainders would have had no influence, because that which they could do would already have been done without them. If the hindrance yields upon the co-operation of b , then a

does not come to its help ; but if it does not yet yield, then gradually every member, however many may belong to the series, will give its contribution to the general activity. So long as this lasts, every member of the series up to d is in a condition of desire. At the moment, however, when the whole force of all the united helps is at its highest tension, the desire, provided the hindrance is not yet overcome, passes into unpleasant feeling (section 36).

All this is very easy to be recognized in experience. One of the frequent acts of ordinary life—e. g., the opening of a door—occurs when no special hindrance interferes, almost unobserved, and without disturbing our course of thought. If, however, any kind of friction opposes, then we gradually exert more force, we desire more and more strongly that the door be opened, until this really happens ; if, however, the effort is in vain, the desire leaves room for uncomfortable feeling, which lasts at least until a new series of thoughts outside the circle of this undertaking presents itself.

220. The position of a hindrance represents often merely something lacking in an ordinary environment. To a series of concepts, a, b, c, d, e , corresponds the series of sense-perceptions, a, b, c, e , in which d is lacking, hence it will be missed, because the remaining concepts can not come into the condition in which they can re-establish the degree of undimmed clearness which existed when d was blended with the others ; in which case it would be natural for them to bring forward not only in the soul, but also in the organ of sense, the concomitant conditions of the actual sense-perception. If the series a, b, c , be strong enough, and

the mind absorbed in it, the regret for the missing member α becomes a longing.

221. Now, in the place of one series, let a tissue of many series be assumed here, which may extend through the whole circle of a man's thought, then a general keen longing for the missing object will fill the whole mind. This is the foundation of that species of love to which its object is indispensable, and which abhors every possible intimation of physical or mental separation. It is known that love is modified through its many different occasions, also that it receives many admixtures, some of them sensuous feelings; where it arises from mere custom, however, it is to be observed in its simplest form.

222. The first essential of a man's character is furnished in the object and manner of his love—from mere diverting preferences all the way up to love as a consuming passion. But just here many formal conditions must be considered, that must be connected with the notion of willing. (In this connection see first four chapters of the third book of my General Pedagogy.)

223. Will is desire accompanied with the presupposition of the attainment of that which is desired. This presupposition becomes united with the desire, when, in similar cases the effort of action has been followed by a result—i. e., by success (219); for then the concept of a period of time which contained the gratification of the desire suggested by association the beginning of a new similar action. From this arises a glance into the future, which glance is continually extended in proportion as a man learns to use more numerous means to secure his ends. Let a series, α , β ,

γ , δ , be formed in the first perception of the course of an event. Now let the concept δ be in a condition of desire. Although as such it strives against an arrest, yet the helps which it sends to γ , β , α may act unhindered in case those concepts just indicated are not arrested in consciousness. Then γ , β , α will be reproduced in proper gradation (as were b and a mentioned toward the end of section 29), and, provided one of these concepts be combined with an action (218), then an action occurs of such a nature that, under favorable external conditions, the previous course of the event may be actually renewed, in such a manner that α , β , γ act as means to the end δ .

224. The will has its imagination and its memory, and the more it possesses of this latter so much the more decisive is it. For a reproduction similar to that just mentioned may run through long and very complicated series in many directions, and call up action in some remote member. Moreover, if we assume that δ (in section 223) be one and the same concept with d (in section 219), the effort in this action is easily explained, so that in the co-operation of α , b , c , d , lies the strength of the will by which γ , β , etc., are roused to the point of action which is the means to the end. The decisive presupposition, however, that the end will be reached is so much the firmer and more certain the more the means are at command—i. e., the further the reproductions just indicated reach.

225. The will is strengthened through the knowledge of dangers and through self-denials.

True, a danger is not the less to be feared because we know it, but the concept of the danger does not effect so strong an arrest if it be blended with the

other concepts. Then also not so much the purpose, as the attempt to attain the purpose, will be resolved upon; but self-denials free the mind from cares and considerations which might cause the will to waver.

226. If, in several points of the circle of thought, places exist in which concepts rise as desires, then in the reproductions through which means and hindrances are considered they may easily meet and oppose one another. The fluctuation in this contest is the practical deliberation which will end in choice.

This latter is originally not a work of practical [i. e., moral] principles; rather, it makes such principles possible, inasmuch as from the frequently repeated choices in similar cases a general will gradually arises, and is established through additional judgments exactly in the same way as the general notions (179-192).

Here, however, is the transition to the following chapter.

NOTE.—The fact that the greater the number of the concept-masses which have been formed in the mind, so much the more harmoniously do they work together, when a desire passes into action as will, is to be distinguished from the fact of general will. But this remark is at the same time to be regarded as preparatory to the following chapter. On the other hand, often in one concept-mass everything is ready for willing, but the other concept-masses hinder the willing; thus dissatisfaction may for a long time precede revolt.

227. The circumstances of the external life often hinder a man from turning his whole will inwardly, with a purpose to develop his character. At other times the favoring circumstances of the will are too large for the limitations of his circle of thought.

The first case is by far the most frequent. For

this reason, especially under an oppressive state of government, a dangerous reserve of unknown forces is to be dreaded. Hence the political necessity to preserve a regulated freedom for human activity.

CHAPTER V.

SELF-CONTROL AND ESPECIALLY DUTY AS A PSYCHICAL PHENOMENON.

228. ACTUAL self-control is to be distinguished from that which a man exacts of himself, and this again from that which he ought to exact of himself.

229. The child, almost unobserved, and without being acquainted with the difficulties of the matter, controls himself, when he puts off an action which serves as a means to an end, and resolves to do it at a future time. Afterward, when the future has become the present, it is found that that present moment has a will of its own, and that the earlier moment could not decide for the present; and, further, that it is a question whether the present will is the same as the former one—meanwhile, perhaps, hardly any thought has been given to this question. The man only gradually learns how easily he can be unfaithful to himself.

230. Experiences of this kind [i. e., wherein we learn the inconsistency of the will] are more striking in great than in small affairs [i. e., in public rather than in private matters] because the injury is more obvious there. Long before a man recognizes the

psychological necessity for making a rule for himself, and for binding himself to it, laws exist in civil society, and these laws are the type of all that which is enounced in later times as ethical laws.

The ruder the man, so much less considerate the laws. On the contrary, the less the danger in making the exception into a rule, so much the more nicely is legislation inclined to distinguish cases; and the greater the faith in the integrity and insight of the judges, the more will be left to their judgment. Yet it is a sign of a good law if it was established before the event occurs to which it is applied, for the warranty of the complete impartiality required lies alone in the fact that the lawgiver can not know the individual case which will be subsumed under it because it has not yet occurred.

231. Conscience follows from self-consciousness, for, when a man beholds himself as an object, he passes judgment upon himself. The inner perception, however, may rise to the second power, and then a man may judge his manner of judging himself.

The question, whether the inner judge may also be partial, arises now, and the danger of a corrupted self-judgment may be learned in a very short series of inner perceptions.

As a necessary security against such partiality, for the inner life of a man as well as for civil society, there is required a fixed law which precedes the cases to be decided. The severity of the construction of this law also becomes gradually relaxed, and it is modified to suit the different kinds of cases until an exaggerated mildness leads back again to the necessity for sharper attention to the rule.

232. In this we see as yet nothing settled in regard to the subject-matter of self-legislation. The necessity for this is met by a general will, as described in section 226, which is, however, very different in individuals; hence, in the beginning, practical (or moral) principles are individual. Decisions as to that which one prefers, or which one finds less tolerable, combined with empirical rules dictated by prudence, furnish the largest part of the earliest system of morality which seeks to control whims and to quench passions through a notion of true and lasting happiness.

233. In practical [i. e., moral] philosophy it is shown that duty is based upon practical (moral) ideas. These latter possess an eternal youth, and through this feature they gradually separate from the class of wishes and enjoyments that grow weaker with time, and they are recognized as the only unchangeable thing which can answer the requirements of a law to the inner man (231). Besides, they bear in themselves the stamp of an unavoidable decree, because a man positively can not escape that judgment whose general form they indicate; hence in those practical ideas is to be found the necessary content which must fill up the general form of self-legislation.

NOTE.—In this is explained the kind of self-government which a man is to exact of himself (228), but it does not determine how much of it he is able to carry out. This latter item is indefinite, and, moreover, a constantly unknown quantity to the individual, inasmuch as no man is able to discern accurately his own psychological states. It is no wonder that so simple a concept of duty does not appear sufficiently emphatic for the general use of moralists, nor that, in order to preach more impressively, they attempt additions which are of an exciting as well as imposing character. In many cases this attempt, if it

be not overdone, is much to be commended. But we can not restrain our astonishment when some philosophers appeal to metaphysical opinions in order to make clear the necessity for duty. For *opinion* only can be considered here, inasmuch as no one will think of making the obligation of all to duty dependent upon metaphysical *knowledge*. On such a basis the eternity of the punishment of hell may finally return to philosophical ethics, which is certainly an effective and probable theory, if pursued with suitable explanation and limitation, and is based upon psychological grounds as may be seen at the end of this book. A system of ethics, however, which is not lax, is bound to have its sharp penalties. And this severity must not be made to depend upon certain decisive expressions of absolute obligation, etc., but only upon the clearness and distinctness of the notions of that which may be condemned, opposed to that which may be commended. That blame which allows no excuse can not be withstood, but if one be resolved to incur such blame, then no system of ethics influences him any longer; he is a sick man who must be healed—i. e., brought to repentance by suffering. Blame does its part of the work when it shames passion. Clear discrimination and analysis of the practical (moral) ideas which make up the ultimate content and true meaning of all moral precepts is the best stimulant for the conscience.

234. Actual self-control and the possibility that a man may carry out that which he demands and should demand of himself depends upon the co-operation of several concept-masses. In this, that general will is manifested, if such has already been formed (226), and in that case it is always located in some kind of concept-mass, a great power which may be recognized in every activity that has a purpose. In this connection we may recall the notion of labor (123). Every kind of labor demands that the will shall keep constantly striving to realize the general purpose, while those voluntary acts which deal with the details and execute the several steps of the process in logical order succeed one another in

and by means of a series of concepts in consciousness, although sometimes with delays and fatiguing efforts, as shown in section 219; but the rational activity of an educated man is composed of many and different labors which of themselves make up a series of a higher kind. The more complicated such an activity is, the more manifest is the power of that dominating concept-mass in which the will of the chief design has its seat over all the others which are subordinated to it in different degrees. Also facts are not wanting which show more strongly than is necessary how tyrannically the dominating will often sacrifices all lesser wishes, so that a single prejudice or a single passion is able, as it were, to desolate and lay waste the whole mind. We must beware of considering self-control merely as such, as something morally good; if it is to be so regarded, then the quality, and not merely the strength of the dominating concept-masses, must be considered.

NOTE.—He who earnestly desires to achieve the highest degree of self-control should, above everything, guard against the delusion of false theories which represent his freedom greater than it really is. These theories are not capable of making one free, they rather plunge one into all the dangers of false security. On the other hand, let every one acknowledge his weak side and strive to strengthen it. This is not accomplished through direct watchfulness alone, but the whole interaction of the man's environment in actual life is involved. As the will originally had its origin in the circle of thought, so through the choice of employments and expedients, it leads back to the further culture and development of the same. The Bible and hymn-book are infinitely important supports to self-control. To many, also, Horace and Cicero are helps. Diet, movement, the bath, and mineral springs, work against mental relaxation. For the educated classes, art (if it did not work for bread!), especially the theatre, could accomplish much. To be sure, when we see that

great poets, with all their love for the theatre, are not willing to confine their poetical fancies within the limits of theatrical representation, we can only lament the lack of German independence which, repelled by French over-refinements, gave itself up not only to the admiration but also to the imitation of Shakespeare. But the real fault of the theatre lies in the speculation upon the purses of the rich and the desire of the masses for a spectacle. The danger which threatens the age in its striving after freedom is that of being caught in the snares of the moneyed aristocracy. For examples, look at England and America.

235. Self-control is a psychological phenomenon, always strictly conformed to an end or purpose, and the power which it exercises has a finite magnitude, notwithstanding that we never can assert that that strength or self-control which a definite individual possesses in a definite moment is the greatest which any person, or to which that individual himself, has been able to attain. Hence ethics in general presupposes rightly, that every passion may be governed, and if a person can not control his passions, then he is justly blamed for this weakness and held to be without excuse according to the idea of perfection.

NOTE 1.—Those who assume a transcendental freedom of the will are bound to attribute to it an infinite amount of power over the passions, or otherwise incur the charge of the grossest inconsistency. For the word transcendental, in this connection, indicates an opposition to all causality of nature; hence the natural power of the passions would be capable of nothing whatever against such a freedom. The relation, however, of nothing to something is as something to infinite magnitude; so that if the power of passion be considered something, transcendental freedom must be considered infinitely strong. It is unnecessary here to discuss further the fact that, on account of its own action, transcendental freedom falls into the same causal relation from which it ought to be free.

NOTE 2.—A short discussion of the questions that arise concerning the mental condition of criminals, which sometimes come from judges and physicians, may make the preceding and the following clearer. The question does not concern philosophic instruction upon the nature of free actions, but the judge assumes that, if at the age of puberty, the criminal was of sound mind, he knew the injurious result of his action; that he would not will such an act to be performed against himself; that he had developed in himself the general notion of this not-willing (or renunciation); and that he knew that civil society would not suffer such actions. By this, if he were an honorable man, he would certainly have been deterred from the action: if he be not an honorable man, then the more firmly fixed his bad character is, so much the more certainly will he be punished, and so much the more certainly will bad action upon every opportunity proceed from this badness. The question then is only, Was the man sick, and in such a condition that we may believe that he acted like one in a dream? For example, might the youthful incendiary be overcome by a morbid desire for fire in such a way that his reproduction did not penetrate to the concept of danger to the inhabitants; or that the universal maxim to bring no one into danger (the higher concept-mass) was hindered in its action; and, finally, that the recollection of civil order, of right and law, was lost? In the last case the criminal would be similar to the unreflecting child, and the culpability so much the less.

236. The conditions of self-control, consequently also the proof of its finite quantity, are to be found in the proportion that exists between the dominating to the subordinate concept-masses. This is in general clear, yet more special remarks, partly upon the dominion of desires and passions, partly upon moral self-control, may be added.

How a desire gradually extends its compass may be seen in sections 223 and 224. The flow of concepts stops and expands at the point which is desired and

not immediately reached. The reproductions awakened by it are collected (at first without order) as fancies, but fancying is gradually transformed into thinking (211), and notions and judgments are formed more and more in regard to desires and in the service thereof. This is incorrectly expressed in the saying, "Passion sets the understanding in motion." Not an entire mental faculty is here moved to a one-sided activity, but only a certain phase of thinking (which we may attribute to the understanding in so far as it is merely a general term for certain kinds of activity in concepts) is created in the thought-mass which has gathered around the desire. Uncultured men, to say nothing of savages, have hardly any other faculty of understanding than that of their passions. But among educated men there are other concept-masses elaborated to the stage of thought called "understanding," and here still another phenomenon is added to that partial understanding that belongs to the passions which is quite as incorrectly (as the above) expressed in the maxim, "Passion suppresses the understanding." For, in the first place, either the other concept-masses of the understanding present themselves too late—after the passion has been gratified—and the flow of the concepts hindered by it has been again established, in which case we say rightly, "The man has been precipitate"; and he himself even will lament that he can not comprehend his precipitation, for his previous act now hangs like a lifeless picture before him (42), and only those concept-masses are active which look down upon these others reproachfully. Or, in the second place, at the same time with the grade of understanding that belongs to the passion,

the higher grade of understanding is awakened in consciousness, although it is not strong enough nor sufficiently excited. From this arises the still more unfortunate result that that combination of concepts in which it has its seat is corrupted and ruined through the notions furnished by passion, which latter, the oftener this occurs, attains so much the more dominion, and shows itself so much the more worthy the name of passion.

We have spoken here of more than one understanding, and there must be more than one, in case the understanding be regarded as a force or as a faculty. For the causal power, the mental energy, lies nowhere else than in certain concept-masses, and of these there are many and very different ones which can all act as understanding. The same is true of the power of imagination, of memory, of reason; in a word, of all the so-called mental faculties; but if one were to allow one's self to indulge in such an innovation in the use of language it would not be well to recommend it for adoption by everybody; for he who would speak of several understandings, of several imaginations, etc., would appear to assert that the several were to be regarded as distinct and separate. The different concept-masses, however, to which all this points, do not by any means admit of any such nice discrimination, but rather, with every encounter of the latter, arise new and often only weak blendings of similar concepts out of which, as their ingredients, they (imagination, memory, etc.) are compounded. The manner of speaking just used is then exceptional, and it remains true that a man possesses only one understanding, one imagination, etc. These, however, are not forces, not

faculties, indeed nothing real, but merely logical designations for the preliminary classification of psychical phenomena.

237. The consideration of moral self-control is now in order. As a preparation for this, we must make moral feeling comprehensible. In the Kantian philosophy, it has been explained that this is useless as a foundation for ethics, and rightly so, for we can in no way substitute it for the moral judgments, or, to give them their general name, "æsthetical" judgments, upon which, as was shown in the practical philosophy, practical ideas depend. Such substitution would confound grounds and conclusions. Moral feeling arises from moral judgments; it is the first effect of the latter upon the total complex of all concepts present in consciousness. The judgments mentioned have their seat in only a few concepts, and these are such concepts as form an æsthetic relation with one another. Upon every encounter of the latter, they (the judgments) arise always and infallibly, provided (and in so far as) a blending of those concepts is not made impossible by the remaining concepts of the series. When they arise, they have the same effect, as if something pleasant or unpleasant suddenly entered consciousness (i. e., according as they contain approbation or blame). By this, they either favor the course of thought present, or they hinder it, and in the latter case action upon the physical organism is often occasioned (e. g., blushing) as well as reaction of the latter on the former.

Before we go further, we may remark here that in the influence just mentioned of the moral judgments upon the remaining concepts, hence in the moral feeling, the specific difference of those judgments is mani-

fested very little or not at all. Whether an unreasonableness, or an injustice, or a malevolence, or a cowardice, or that which otherwise may be a moral perversity is felt, that disturbance which may cause the thread of thought which is running through consciousness to suffer, will in all these cases be about the same. In this respect, much will depend upon the relations which the concepts present in consciousness hold toward one another, and upon the rapidity with which their series pass before consciousness. The most essential task of practical (or ethical) philosophy, however, is to make quite clear the specific difference between the different moral judgments; consequently, the moral feeling which does not give this difference, also does not give us the principles of that science.

Let it be assumed that a desire is just projecting its plans (236), and while a means is devised for its gratification, the moral perversity of this means is felt, then the feeling acts as a hindrance and checks the course of the concepts, exactly as when an action in the outer world does not succeed (219). During this suspension two things occur simultaneously: First, the concepts which proceed from the desire increase in volume; secondly, however, the moral judgment also gains time to present itself. Now the question is whether this judgment is connected with a strong thought-mass which, as it spreads more and more in consciousness, gradually suppresses that increasing desire, without, on its side, suffering in its development from the unpleasant feeling into which the suppressed desire changes? If this question can be answered affirmatively, the self-control is present.

238. A purely moral self-control which is uniformly

present in every act of commission and omission, as well as most careful to protect all subordinate interests and wishes, is an ideal to which the name psychical organism may be given. For to it belong such a union and subordination of concepts as is not only adapted to the smallest as well as the largest combinations, but is also capable of appropriating to good purpose all additional new external impressions. This self-control is the aim of education and of self-development. How near a man may come to this aim can not be determined, and for that reason the effort toward it is unlimited.

239. As the power of self-control is never the work of a moment, but rather the result of the whole past life, so also no particular time of life can be considered to be decisive in regard to it. A considerable stock of thoughts and feelings which has no comparatively great addition to expect (the decrease in susceptibility is to be borne in mind) must first be present, before such an effective concentration of mind can occur that a man is able to come to a successful resolution concerning himself in general. Then, however, when this condition is fulfilled (as a rule, at the end of the educational period) it is time for the deepest reflection, for the most comprehensive practical deliberation. For upon the thoroughness of the combination into which the concepts enter, upon the exact knowledge of his innermost wishes which a man now attains, upon the right position in the outer world which he now prepares for himself, depends the strength as well as the correctness of the guidance which he will give himself henceforth, and just upon this depends also the right reception of everything new to which the course of life will further lead.

CHAPTER VI.

PSYCHOLOGICAL OBSERVATIONS UPON THE DESTINY
OF MAN.

240. PSYCHOLOGY will remain one-sided so long as it considers man as standing alone. For, in the first place, he lives in society and not merely for this world; secondly, these two facts give rise to various attempts to sketch ideals whose attractiveness elevates them (the ideals) to an actual mental power.

In every social whole the individual persons are related to one another in almost the same way as the concepts in the soul of the individual if the social ties are sufficiently close to secure the mutual influence completely. Conflicting interests take the place of the opposition among concepts. The inclinations and needs of assistance from others furnish those conditions which were known in the foregoing under the name of complexes and blendings. The direct results of the psychological mechanism which here makes itself felt on a large scale are, that the many are depressed by the few so much as to lose social significance; that even of these few only a small minority attain prominence; that every society in a condition of natural equilibrium assumes a pointed (pyramidal) form (see section 82) at the top. The laws of movement controlling the psychical mechanism do not suffer complete stagnation any more here (in the social organization) than in the individual. On the contrary, they secure reproductions of that which often seemed to have entirely disappeared, which reproductions often work through long series of social combi-

nations. Such movements [of the struggling lower masses in the social whole] are often much more apparent to the apperception of cultured people on the higher planes than is the relation of the subordinate to the higher concept masses in the inner world, provided the individuals [of these lower masses] are not warned and are not sufficiently watchful to guard against audible and visible expressions. For, in case the governing power is harsh and violent, they [the individuals of the lower orders] are accustomed to hide from it; but when in any place the throne becomes a bed of rest, then it is with society as it is with [the psychological mechanism of] those individuals who exercise no supervision over themselves.

241. If observations of this kind were completely elaborated, they would furnish a science of politics [or of sociology] similar to the empirical psychology in the first part of this book. After it would follow an empirical summary of that which may be found in the history of nations as permanent contrasted with the transient. If one does not perhaps prefer to consider the different ranks and orders of society as corresponding to the so-called faculties, he may take up the three separate powers of the state, the legislative, the executive, and the judiciary, and these will take the place of those psychical faculties and afford suggestive analogies. History, however, will deal with the changing conditions of nations. Finally, in order to give a companion picture to rational psychology, we must, after the manner of the science of statistics, first describe the body of the state—as a part of the earth's surface—together with the traffic taking place on it; and the reaction of this upon the mind of the people—i. e.,

upon their social sentiments and views. The discussion of the true moving principles of the historical events narrated, however, is to be looked for only in the philosophy of history.

242. The foregoing remark reminds us that the philosophy of history depends upon psychology, and that it does not presume to investigate the ways of Providence, which, notwithstanding the often-heard discussions upon the spirit of the age, still are and will remain obscure. Here are to be found illusions similar to those in the philosophy of nature, as for example when the teleological phenomena of nature are confounded with biological phenomena, as if one investigation might include both series of phenomena in one view, and even as if the type of a general necessary course of nature might be discovered by inventorying and comparing the phenomena which occur upon the earth before our eyes.

It is certain that no history of known countries and nations can ever furnish a world history in the true sense of the word. Furthermore, it is certain that no theory is able to give a notion upon it which will have even a shadow of truth. On the other hand, it is just as certain that every attempt of this kind, however remote, exhibits a foolish forgetfulness of human limitations. Just as certainly ought the philosophy of history to guard against smuggling in a systematic totality into the different forms in which historical events and social combinations are shown, as if one were to be the necessary complement of the other, and all united were supposed to make up a complete exposition of the human mind. All history up to the present time is a beginning whose sequel no one

can foretell, and the present condition of things is as little a condition of general wickedness as of perfection.

However, as psychology keeps in view the sinking and the already sunken concepts together with their combinations, in order not to be taken by surprise at the renewed rising of those concepts, so also shall the philosophy of history trace out the suppressed forces and the germs of better and worse hidden in them, so that the combinations under which the good may rise and the bad be overcome, may be made clear; for, in order to know what is to be done and what avoided every age wishes information upon this question. The statesman demands of the philosophy of history that which the educator demands of psychology. For both, iron necessity which admits nothing else, and absolute freedom, which holds nothing firmly, are equally injurious delusions. Movable and tractable forces which, however, under certain circumstances gain a definite form, and gradually a lasting character, are the fundamental hypotheses of pedagogy and politics. Such forces have been indicated in the foregoing.

243. The conditions of mental health already recognized, which change into the health of the citizen life, demand a useful survey of that concerning which the philosophy of history inquires in every state for every epoch, and for the secure establishment of which it has to seek. If with mania, delusion, dementia, and idiocy, we wished to compare the madness of the desire for innovation, the delusion of party spirit not curable through any experience, the capricious separation of ranks or castes, communes, provinces, from the bond of union of universal order and unavoidable reciprocal action, the slack and blind toleration of such

mischievous perversions—such a comparison, since it can not be accurately carried out, would indeed seem too difficult and too little instructive. But certainly equanimity, susceptibility, concentration, and reciprocal determination of all concepts through one another find their counterpart in the healthy and well-ordered nation wherein each one applies himself peacefully to his business, yet, upon the call of a general need, each one obeys and acts, and all together accomplish what is required; and also the whole receives the impulse communicated to it from all parts. The last point may appear the most difficult to secure, but certainly that public life is not sound which separates itself from the concerns of the smaller circles instead of taking advantage of them.

244. Men form an ideal of society, similar to these psychological features just sketched, oftener, no doubt, than they would if under the guidance of a practical [i. e., moral] philosophy. For that which lacks the co-operation of the social forces, that which collides with the rest and makes too much friction without serving any good purpose, will be easily observed, and condemned as unfitting.

However, as we may imagine that which is defective improved by something better, so man assigns to himself the place which he would like to occupy in an ideal society. He believes it his destiny to take this. His calling or vocation is an approximation to it, or his position and influence, which in actual society are as nearly as possible similar to destiny, serve the same purpose.

Here, where all plans are, as much as possible, united, lies the unit point of his character, although

with great differences; for the concept-masses which concentrate here do not always hold a secure control. Many can only at moments think of a special elevation in their condition.

If a character, however, is to become quite mature, a chief directing motive of the will, which furnishes the trend for all individual acts of willing, must exist. The man's ideal of his place in society is, in this case, the soul, as it were, of that psychical organism mentioned in section 238. The forms of character differ as greatly as do the relations of the concept-masses.

Through the above, the great difference between plans and maxims comes to view. Men who have once found their sphere, and have reached their place according to their own view, now, without demanding anything more, adjust themselves to it according to rules of prudence, order, morality, right, duty; and the punctual observance of these points without exception is the foundation of their inner satisfaction.

Observed psychologically as well as morally, these characters are very different from those who live according to dominating plans, and consequently either have something to seek, or else something to save, so that it may not be entirely lost. It is true that we do not by any means find an entirely pure morality always connected with punctilious observances; on the contrary, the application of the received maxims varies greatly. On the other hand, the ideal of the vocation and calling which is the source of all practical plans is not by any means something indifferent to morality, but what is held most righteous and pure by society may constitute the foundation of this idea. But, let plans for life be what they will, they may miscarry, and

whoever depends upon them alone may go to the bottom; consequently, in order to save himself, a man may come to the place where he will make use of bad means. At least he may not avoid the thought of them, and will by this to some extent be disturbed. We must admit, accordingly, all other things being equal, that characters with dominating plans are the more energetic; characters with dominating maxims are the purer.

245. A man can not be blamed, however, for connecting his plans according to his idea of his rank and vocation, and for fixing the latter according to his idea of society; for, however necessary the moral self-control of his inner life, it is not enough to form one's chief occupation. The individual, knowing himself as earthly and fragile, separated from society, is in his own eyes too small, too narrow. He needs at least a family, and even this does not fill his mental horizon. To fill his place in the social whole is the highest aim which he can see clearly; not to see so much as this would be narrow-mindedness.

Even in the strongest characters, a source of suffering is to be found in this connection. If they wish by means of maxims and principles to stand morally firm above all practical details (*Pläne*), they must suffer whenever the movement of society carries them away from their ideal; indeed, the suffering begins as soon as their actual occupation, instead of approaching the ideal, begins to deviate from it. Under such circumstances, a man looks higher; he peers into the obscurest distances, and tries whether it be possible, without becoming visionary, to draw a mental picture of that distance.

246. Since the soul is immortal, the career of the individual man can not be confined to the earthly life. Totally unacquainted with the arrangements of Providence for the remote future, we can, however, ask what would necessarily occur, merely according to psychological laws, and without any other influences, when the bodily covering is dissolved and the dissimilar elements are scattered.

First must disappear the special influences which the body was fitted to exercise at the age the man has reached; hence must disappear the obstruction through which the oldest concepts, which in themselves are the strongest, were limited in the vigor of their action. Hence death is rejuvenescence without bringing back childhood; for none of the combinations of concepts that were gradually united can be again set free. Meanwhile, the condition of the earthly life which was last present, with its cares and burdens, is reduced to its due share of importance in the whole past.

247. While in general the striving for equilibrium determines the movements of all concepts, yet, in order to attain this equilibrium, very great revolutions among them may be necessary. For it has been shown how, out of the movements, new laws of movement arise (207), and how the irregular accumulation of concepts during life (208) make necessary a subsequent rearrangement. This new elaboration and rearrangement after death must, it is evident, differ greatly from that which occurs during life here in the midst of earthly, sensuous things. A dream can have no similarity whatever to it; for, although the senses become closed by sleep, the latter (sleep) also depresses the

concepts so that the laws of their connection only act partially. Through this partial action the distorted figures of the dream arise (216). After death, however, when free from the body, the soul must reach a more complete state of wakefulness than it ever did in life.

248. However, the product which concepts striving after equilibrium gradually create can not be quite the same in any two human souls, since all differences of the earthly existence must exert an influence upon them. The concepts of the child that has died young would very soon approach their general equilibrium, and so also the thoughts of the man of peaceful conscience, who is simple in his actions and desires, are not destined to any great change. On the contrary, no restless, far-reaching mind, fettered by the world and suddenly torn therefrom, can attain the stillness of eternity otherwise than by a passage through violent transformations which, owing to entirely changed conditions, may be still more stormy and painful than those by which the passionate man is so often tormented in this world.

249. Finally, however, after the lapse, longer or shorter, of what we call hours, days, and years, for every soul, however deep and confused its disorder may be, such a movement of concepts must take place as will approach more and more gently, and by less and less intervals, to the general equilibrium, yet without ever entirely reaching it.

Finally, for the dying man, time becomes extinct; yet even this takes place in a manner that implies time. Eternal life is an infinitely gentle fluctuation of concepts, an exceedingly faint trace of that which we call life.

250. Without agitation, but in a state of the clearest wakefulness, the soul knows and feels the nobility or want of nobility of its former career upon earth, which it carries within itself as the imperishable character given to its Ego, and for that reason as an inseparable good or evil; and it is incapable even of desiring or even of wishing that its state or condition should be otherwise than it is.

Yet here the fact must not be overlooked that in these disordered souls, after the great inner revolutions which ensue upon death, it is impossible that all the misery which they had brought together while they existed in body should continue to endure. Exactly the opposite. The objects of desire and the brief period of endazzlement by the same, together with the discord in the bodily conditions brought about through violent passions, all this has long ago disappeared; the child-like peace has not entirely, though it has in part, returned, and has soothed the wounded feelings, and healed the madness of passion. As the delusion weakens, the truth comes forward. More loudly and clearly the conscience speaks; finally, it speaks alone: the sinner is converted, and remorse loses its sting.

251. Providence has permitted that very different destinies be prepared for men in the world. To us the difference seems great and important, a few years after death it may be very much lessened. The simple sense-perceptions, this first material of the mental existence, are for all persons the same, and, even in the short life before the power of speech is gained, the child, by reason of its great susceptibility, receives a considerable number of them. Many combinations

of this raw material which the earthly life had not secured through its experience will be completed in the future, not to create new knowledge (at least this might be difficult to indicate), but to produce a peaceful well-being. Now, if something of the difference that exists in the earthly career be continued into eternity—a difference distinguishing good men from bad—then the life here may be for all full of purpose, and every individual, considered for himself alone, without any comparison with others, justifies the act of Providence which caused him to enter upon an earthly existence.

252. Thus appears the remote future, seen from the standpoint of science, whose foundation is nothing but common human experience. Upon this nothing can be positively asserted. Probably everything is otherwise arranged because some kind of divine government is probable; in the foregoing statement, however, only that has been suggested which, without any fore-ordination, might ensue of itself. If we wish to investigate this last question more closely, the possibility of such an investigation will improve with the progress of the statics and mechanics of the mind; but, as all metaphysics arise from experience, and as no experience without metaphysics furnishes a genuine scientific knowledge, so on the other hand metaphysics is not able to take a single step beyond the limits at which the necessary development of the ideas of experience ends.

SYLLABUS OF HERBART'S PSYCHOLOGY.

Pages 1 to 25.

1. WHAT relation does psychology bear to natural philosophy and to metaphysics?
2. How does psychology compare with natural history, with physics, and with physiology as to material and means of study?
3. How is a concept affected by the encounter with an opposed concept?
4. What relation of concepts permits one to come into consciousness in preference to another?
5. How many concepts that are in consciousness combine with one another?
6. In what order do blended concepts act upon one another in reproduction or memory?

Pages 26 to 35.

7. What prime objection is to be met in regard to considering psychological questions from a mathematical standpoint?
8. In general, to what source must feelings and desires be ascribed?
9. How is it shown that inner perception is an active process, never a passive apprehension?
10. To what limit only may the power of inner perception ordinarily extend?
11. Of what elements must every concept be made up?

12. How does the period of manhood differ from the period of childhood in the matter of acquiring simple sense-concepts?
13. What is the essential work of mature mental life in relation to these simple concepts?
14. What influences may the body exert upon the psychical process?

Pages 36 to 53.

15. Can all well-known facts in psychology be explained from accepted fundamental principles?
16. Why can not elementary facts in psychology be determined from a study of the action of the mature minds?
17. Upon what distinctions are the author's two classifications of mental faculties based?
18. Why can not these classifications be deemed either final or complete with regard to the acts of the mind?
19. What reason is given for declaring the causal relation from sense to reason to be untenable?
20. How is the mental faculty of brutes to be regarded as compared with that of man?
21. In what sense is the power of directing attention to different acts a characteristic of human mind?
22. Shall concepts be viewed as combining in consequence of an act of the understanding or because of external conditions?
23. What necessary limitation of capacity in the training of brutes finds a parallel in the case of man?

Pages 53 to 73.

24. Which of the "five senses" seem sufficiently complex in respect to the variety of sensuous impressions to justify the naming of more than five distinct senses?
25. What constitutes the work of the "inner sense"?
26. What analogy as to organ or function can be traced between this "inner sense" and the several outer senses?
27. What test may serve to show a series-form to be distinct from another series-form in which it might otherwise be included?
28. In what matter especially has the science of logic tended to obscure the findings of psychology?
29. Is the highest value of the reproduction of concepts to be found along the line of memory or of imagination?
30. What bearing may the determination of this question have upon the methods of good or bad teaching?

Pages 74 to 96.

31. Upon what distinctions are the three kinds of feelings classified?
32. What examples may be cited of feelings which arise wholly from the nature of that which is felt?
33. With respect to the relation of desire to the feeling, as cause or effect, how does the second class of feelings compare with the first class?
34. Upon what characteristics is the third class of feelings based?

204 SYLLABUS OF HERBART'S PSYCHOLOGY.

35. In what essential do the emotions differ from the feelings?
36. What phases of mental condition or action must be included under the faculty of desire?
37. What forms constitute the lower and what the higher faculties of desire?
38. What psychological explanation is presented of "freedom of will"?
39. How are the senses and the powers of reproduction related with reference to the mental life?
40. How are the inner sense and outer action related with respect to the formation and retention of habits and the acquirement and maintenance of accomplishments?
41. In what two views should the practical teacher observe the series of concepts in teaching and training his pupils?

Pages 97 to 118.

42. What evidence have we that a concept once created is never lost?
43. Why is there so great a disproportion between the multitude of concepts and the conscious mental acts?
44. How is the necessity for change evidenced, and how is it ordinarily satisfied?
45. How do the successive ages of man's life differ as to feeling, thought, and action?
46. What differences of natural faculty are dependent upon sex?
47. How may natural dispositions be classified upon the basis of temperament?

48. Is the greater force in a man's development that of his natural talents or that of his external circumstances?
49. What constitutes man's freedom of action in view of the force of external influences?
50. What are the essential differences between the healthy and the several diseased conditions of mind?

Pages 119 to 150.

51. With what negative descriptions is the simple and wholly unknown nature of soul defined?
52. What view is to be taken of concepts as acts of the soul?
53. What must be recognized as the source of all vital forces?
54. What part does the nervous system bear in the relation between soul and body?
55. How do concepts of space relation arise in the mind?
56. How do the time concepts arise?

Pages 150 to 178.

57. How do individual concepts form themselves from the original unity of conception?
58. How do the properties of an individual object become separated in judgments?
59. Why does an object in motion make a deeper impression upon the mind than could the same object at rest?
60. What is the origin of the concept of self?
61. What constitutes the mental process of intuition?

206 SYLLABUS OF HERBART'S PSYCHOLOGY.

62. From what three several causes may the ungoverned mental activity arise?
63. What conditions determine the act of involuntary and passive attention?
64. In what relations do mind and body react upon each other?
65. How does the will involve an imagination and a memory?
66. How is the will affected by knowledge of danger and by acts of self-denial?

Pages 178 to 200.

67. What constitutes an act of self-control?
68. What is the necessary relation between the laws of civil society and man's habit of self-control?
69. What is the origin and function of conscience?
70. Is the power of self-control to be regarded as limited or as unlimited in the case of any individual?
71. How do the passions affect the understanding both to set it in motion and to suppress it?
72. What is the source of moral feeling?
73. Upon what elementary conditions does moral character, or man's correct guidance of himself, depend?
74. In what respects are the relations of individuals in society analogous to the relations of concepts in one's mind?
75. Reasoning from the principles of psychology, what destiny awaits man?

THE END.

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